

Lovell

for CONSTRUCTION

CONTINENTAL SELLING PRICES: AUSTRIA Kr.25; BELGIUM Fr.25; DENMARK Kr.35; FRANCE Fr.30; GERMANY DM20; ITALY L.500; NETHERLANDS R.20; NORWAY Kr.55; PORTUGAL Esc.35; SPAIN Pts.40; SWEDEN Kr.35; SWITZERLAND Fr.20; EIRE 12p

FINANCIAL TIMES

No. 27,387

Wednesday October 19 1977

*12p

another IDC design & build contract

IDC
 New £8 million LIVERPOOL HEAD POST OFFICE
 opened 12th Oct 77
 IDC Limited Stratford-upon-Avon Tel: 0789 4288

STOCKS SUMMARY

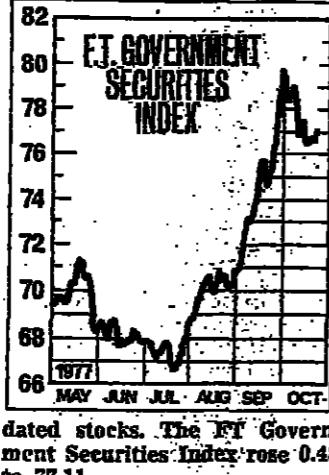
ERAL

Police
ay
int by
ees**BUSINESS**

Equities rise 14.0; gilts advance

• **EQUITIES** moved ahead, with market sentiment buoyed by optimism about prospects for wage restraint. The FT 30-Share Index advanced 14.0 to 531.1, its biggest rise in a single day for over three weeks.

• **GILTS** also gained ground, with trading mostly in short-



long. The FT Government Securities Index rose 0.48 to 77.11.

• **STERLING** gained 12 points against the dollar to \$1.7740 and its trade-weighted index rose to 62.5 (62.4). Dollar's trade-weighted depreciation was 1.27 (1.25) per cent.

• **GOLD** rose 25¢ to \$160.375.

• **WALL STREET** edged up 0.17 to 820.51.

• **U.S. JUSTICE** Department has

launched an anti-trust lawsuit

against the New York coffee and sugar exchange. Page 33

• **xi driver killed**

John Anderson, a 67-year-old driver and former RUC re-

alist, was shot dead in an

attack on Girvan's Bridge, Ballymena, near Oxford, and

her later, probably, near

ich. Page 4

• **Shell to cut**

staff by 400

• **SHILL** U.K. OIL plans to cut

its staff by about 400 over the

next two years, because of the

depressed oil products market.

The Association of Scientific,

Technical and Managerial Staffs

has warned that any enforced

redundancies could lead to a

strike. Back Page

• **95 round trip**

• **U.S. JUSTICE** Department has

launched an anti-trust lawsuit

against the New York coffee and sugar exchange. Page 33

• **to mediator**

• **mediator's report** on the

month-old strike in support

of a closed shop by journalists

North of England Newspapers

Darlington has been rejected

the National Union of

Journalists' national executive,

which plans "guerrilla strikes" at

Westminster Press titles. Back Page

• **brat** talks

Adolfo Suarez starts the first

real visit to Britain by a

Spanish Prime Minister since the

war to-day. He will discuss

country's application to join

EEC and is expected to raise

question of the future of

the war machine. Back Page

• **elgrade clash**

• **U.S. and Soviet** Union

shed over human rights at the

sovereignty conference

Mr. Arthur Goldberg, the

5th delegate, criticised trial

Prague of four Czech dissidents

who were sentenced to

long terms from 14 months to

years for subversion. Page 4

• **ll-weather food**

George Bassett of Sheffield has

in a £1m. order to supply 8m.

rs. of nougat to Saudi Arabian

children. The company's

agent gained recognition in

1975 when it was used in the

reverst expedition and praised

the way it withstood cold

cather.

briefly . . .

ing Crosby was buried in Los

angeles after a funeral attended

by his family and close

friends.

shambers City Council is to

act restaurant owners who

only to South African Government

authorities for permission to

serve all races. S. African

ews. Page 6

Charles arrived in

Chicago at the start of a 13-day

official visit to the U.S.

• **CHIEF PRICE CHANGES YESTERDAY**

(Prices in pence unless otherwise

indicated)

• **RISES**

Treasury 12.1p. 1976 £1104+ 14

Assur. Leisure 56 + 7

BSF 119 + 11

Baird (Wm.) 168 + 11

BATS Deed. 235 + 10

Barclay Bank 320 + 8

Beecham 655 + 12

Bibby 182 + 8

Birley Leslie 94 + 7

Barton A. 91 + 6

Bartsch 168 + 8

BBM 224 + 8

Bell 391 + 7

Bell 224 + 8

Bell Refining 99 + 11

BGP 100 + 11

Barlow 183 + 10

Barlow 184 + 10

Barlow 185 + 7

Barlow 186 + 7

Barlow 187 + 7

Barlow 188 + 7

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Strange silence in the City

BY MARGARET REED

THIS WEEK brings the anniversary of several high-level state, including some lay members to meetings foreshadowing the creation of a self-protective City. It would probably absorb the securities markets to protect in take-over Panel and work closely with the Stock Exchange Quotations Department. Under a late announcement, the City because of adjustment of the planning for it rejected the imposition of a body, its expenses would be legally-backed regulatory system shared among the Stock like the U.S. Securities and Exchange and other City organisations, rather than passed on to the Trade Secretary, called the investing public by a charge on the Bank of England on share deals as at first envisaged on October 21, 1976 to "develop the aged".

surveillance of the securities industry with a view to improving the effectiveness of the existing self-regulatory machinery."

Wider system

Such key personalities as Mr. Gordon Richardson, Governor of the Bank of England, and Mr. Nicholas Goodison, chairman of the Stock Exchange, are supporting a wider self-regulatory system in speeches on the same day at the annual Mansion House banquet for the bankers and merchants of the City of London.

Yet, 12 months on, despite much painstaking work behind the scenes, nothing more has been said publicly about the project for a new super-umpire body to ensure fair play in stock markets. And now, around the City, one begins to hear the muted, but insistently rhythmic inquiry: "Why are we waiting?"

Another long sequence of share price jumps has occurred ahead of take-over bid announcements, giving rise to suspicions of insider trading. And developments like the SUITS affair and re-scrutiny of later aspects of the secondary banking crisis such as the Slater Walker debacle have kept alive interest in improved surveillance arrangements, at least to give the City a better image.

The public silence on the wider self-regulatory system promised a year ago is, admittedly, somewhat misleading. Secret discussions began last winter between Mr. Richardson and the various City bodies, and more detailed consultations this year, have already yielded the blue print of a new body spanning a wide ambit of the securities markets with power to investigate, and speak out on, whether any supervision can suspected malpractices.

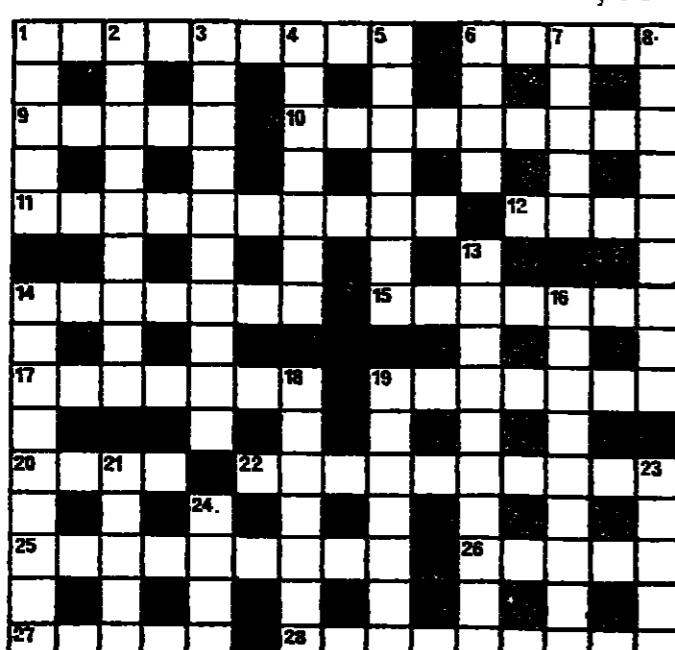
The projected Council for the Securities Industry would be backed by the various City associations under the aegis of the urgency in launching the new Bank of England which, it is self-regulatory system. Without hope, would clothe it with come the next scandal, many adequate authority despite its will demand, of the still no lack of legal powers. The idea is perfectly regulated City market that it would have a high-kicks: "Mend them or end them."

TV Radio

BBC 1

John Craven's Newscast. 5.05 All Regions as BBC 1 except at the following times:—
The Peppermint Pig. 5.40 News. 5.55 Nationwide (London and South-East only). 6.20 Nationwide. 6.50 It's a Knockout. 6.55 Secret Army. 9.00 News. 9.25 The Fall and Rise of Ronald Perrin. 9.55 Sportsnight. 10.45 Tonight. 11.25 Weather/Regional News.

F.T. CROSSWORD PUZZLE No. 3,496



ACROSS

- Angry remark that may be cryptic (9)
- Hamper providing credit to a politician (5)
- Old English fish (5)
- Range or site for shooting (9)
- Solitude of learner on Eastern line ship (10)
- Two notes and nothing more (4)
- Put back soldier in front of workshop (7)
- Eastern animal is eating away (7)
- News that's usually good (7)
- Cake associated with a cross (7)
- Former part of re-union ceremony (4)
- Toad has to talk to sailor (10)
- Foolish person is gullible not to return (9)
- I must appear in bewilderment but it's corny (5)
- Without a turn but very precise (5)
- Return to a former state and cover rent anew (9)

DOWN

- Mode of progression faster in water than on land (5)
- Arranged a design or medley (9)
- Rest then jump and be entranced (10)
- The crime of a receiver (5)

RACING

BY DOMINIC WIGAN

Trumpets may sound for Colonel's Boy

PLAYBOY BOOKMAKERS, who Sussex course, the Newmarket have sponsored a number of competitive races on United Racecourses track this year, will be pleased with the turn-out for their seven furlongs Playboy Bookmakers Handicap at Sandown today. This three-year-old

fully expect Colonel's Boy to cope again with the runner-

SANDOWN
1.30—Lady Lindsay***
2.00—Acolyte*
2.30—Screaming Grebe
3.05—Red Johnnie (E.W.)
3.35—Assurance
4.10—Hilo
4.40—Tierra Fuego
5.10—Keyon

REDCAR
2.15—Postplay*
2.45—Sofala
3.45—Country Walk
4.45—Sweet Jest
CHELTENHAM
2.00—Baronial
2.30—Cruisin' Law
3.15—Sparkle Again
3.45—Irish Moth

up whom he meets on 4 lbs worse terms for a two-lengths victory, but believe that Red Johnnie could well provide a gain his third successive victory in this event.

NIGHT NURSE makes his jumping bow for the season at Newbury on Friday when he confers the William Hill Hurdle. The six-year-old who

has been seen in action on the

racecourse will be bidding to

win his third successive victory in this event.

SALEROOM

BY ANTONY THORNCROFT

Book auction exceeds £75,000

A FIRST edition of Sir Isaac Newton's "Principia Mathematica", which had belonged to Professor Arndt, sold for £7,200 (double its estimate) at Sotheby's yesterday to Blackwells.

It was the top price in a two-day scientific book auction which totalled £75,214.

Other high prices yesterday were £2,000 for a collection of 16 chemical and medical works by Glauber, and £1,600 for a first day scientific book which

was £600 for an Art Nouveau tea and coffee service.

In a sale of pictures, drawings and water colours held by Christie's at the Singer Museum, Laren, Holland on Monday, totalling £504,979, an extensive

wooded landscape by Barend Cornelius Koekkoek, signed and dated 1842, sold for £36,951.

Also at Sotheby's, a sale of modern and antique firearms and armour, totalled £73,250. An apparently unique 15th century suit of plate, by Landen, went for £2,800, and a pair of Scottish belt pistols of the 16th century for the same amount.

Oriental ceramics brought in £17,745, and at Belgrave the top price in a Victorian picture auction which made £30,284 was £900 for Agnew for a polo scene by Aldin.

The furniture sale at Phillips totalled £145,660. Mumtaz paid £7,000 for a 17th century Antwerp bronze cabinet, and

£5,400 for a mid-18th century South German bureau cabinet.

Among the rugs a Kashan sold for £6,000. Bonhams silver

which also paid £1,300 for a Meiji period rectangular Suzuki bako.

An auction of English drawings and water colours also at Christie's, totalled £32,491. A

pair of water colours of Venice by Thomas Bush Hardy went for £250 to a London dealer, N. Brage.

A water colour by Albert Goodwin of the "Barley fields" sold for £250 to O. and P. Ely, who also paid £200 for a

Goodwin water colour of "Kings College, Cambridge" made £750.

Robson Lowe International, the stamp auctioners associated with Christie's, is to auction the three Great Britain £1 "Seahorse" stamps presented by the Post Office to the Tate Gallery for the Stubs Appeal.

The stamps, issued in 1913, will be included in a specialised

sale of Great Britain stamps and postal history next January and

February for Scotland.

In London yesterday, meanwhile, a sale of fine Japanese ceramics, lacquer and bronzes totalled £52,395. A late 17th or

early 18th century Imari circular deep tureen, cover and stand

by a maker of the same

name, sold for £2,200 to a private buyer, who also paid £2,000 for

an unusual Imari bell-shaped £2,000.

A painting by Abel Grimmer of the "Tower of Babel" brought £20,785; a street scene in Rotterdam by Johannes Christian Karel Klijnkenberg £16,168; a painting of the "Prinsengracht, The Hague" by Johannes "Jan" Weissenbruch £13,394; and a river scene by Johan Barthold Jongkind £11,085.

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EUROPEAN NEWS

Jenkins plan to aid EEC applicants

BY GUY DE JONQUIERES, COMMON MARKET CORRESPONDENT

THE NINE states in the EEC that its entry negotiations with should consider launching a big a time for it to become a member programme to help Greece. Spain and Portugal raise their by 1981 at the latest economic performances closer to the EEC average before they have been that its application must be considered separately from those of Portugal and Spain.

He told a meeting of EEC Mr. Jenkins warned the foreign ministers that the aid could be channelled through a new ad hoc EEC fund, or through existing instruments suitably enlarged. Unless money began to flow to the candidate countries before entry, the EEC could be faced with offering them an impossible long transition period after they joined, he said.

However, his proposal may well be viewed in some quarters as a device to delay the formal entry of the three candidate countries by requiring that they some form of customs union or free-trade area would represent the abandonment of the essential economic responsibilities of full membership before, rather than after, admission. Such a suggestion would be resisted Underlining the size of the problems at hand, he said that, especially strongly by the Greek Government, which still hopes

governments were raised to 60 per cent. of the average within of the Council, who said that the EEC, it would be necessary Nine wanted enlargement but to raise sums which would not its financial consequences double the present national He warned that the EEC was fiscal resources of Portugal and committed to a "dangerous cover" than twice the path, because it had responded deficit in its balance of pay too rapidly to the membership requests without making adequate preparation.

The Commission's CAP reform proposals, which call for structural changes in Mediterranean agriculture rather than more extensive market support mechanisms, were attacked by France and Italy as too vague. Both governments called for immediate action to help EEC farmers in Southern Europe.

According to German official circles, it was agreed that when the matter comes before the European Science Ministers' Council meeting next Tuesday, binding majority votes will be taken to set up two Jet projects. One will be at Culham, near Oxford; the other will be set up later, probably at Garching, near Munich, a site for which Bonn had been pushing.

The emotional release felt all over West Germany to-day at the relatively successful ending of the hijack nightmare clearly flowed into the atmosphere of the talks between Mr. Callaghan and Herr Schmidt, which were flanked by discussions between Mr. Denis Healey, Mr. Harold Lever, Dr. David Owen, Mr. Edmund Dell and their opposite numbers on a variety of topics.

A successful conclusion for both sides was also reached to the long-standing irritant of off-set payments for the British Army of the Rhine. West Germany, more from the Witteveen supplementary facilities fund which would be applied to Portugal's critical balance of payments.

IMF negotiations are being conducted in secret, but in Portugal they are already under way.

Before it receives the \$30m. loan, which will be paid in the next three years, Portugal is expected to implement an emergency plan which could involve a "shock" 30 per cent. devaluation of the escudo, drastic cuts in public spending and drastic reductions of imports.

The terms, concluded between officials several weeks ago, are more favourable to Britain than had been expected.

It was understood that there was no discussion of the vexed question of contributions to the Community budget.

LUXEMBOURG, Oct. 18.

JET to be set up in U.K., Germany

BY ADRIAN DICKS

BONN, Oct. 18.

THE PRIME MINISTER and Chancellor Schmidt to-day reached a compromise on the Joint European Torus nuclear fusion research project.

According to German official

PORTUGUESE INDUSTRY CRITICISES GOVERNMENT

BY OUR OWN CORRESPONDENT

LISBON, Oct. 18.

the CIP says it believes the Socialist Party has "improved an economic system in Portugal which is totally unable to satisfy the needs of the Portuguese people. The Government has been unable to mobilise the nation or reach a political agreement with democratic parties and a contract with management and labour."

Responding to the tendency of Left-wing parties to make

private industry the scapegoat for Portugal's present troubles, the CIP note says "although we have been belittled and undermined, private investors have been the only factor preventing total collapse of the Portuguese economy. Dialogue is only possible if they act as social partners, not as sounding-boxes for political party interests."

Credits honeymoon is over

BY DIANA SMITH IN LISBON

State-owned companies, with a society and nearly 200,000 refugee heads of family still few honourable exceptions in ship repair and transport materials, have no done well in the past two years. Private companies have suffered from a lack of capital. Management has been hesitant to invest and there has been stiff foreign competition, even the Government has been powerless to reduce chronic abstentionism, cut unbranded domestic consumption and inspire confidence among management or workers (whose unions are dominated by the militant Portuguese Communist Party, to whom the word "Eurocommunism" is meaningless).

Thus, Portugal consumes as if she were producing accordingly. The yawning gap is reflected in her trade deficit. In less than four years, the trade gap has widened from \$282m. at the end of 1973, the first year of the oil crisis, to \$32m. at the end of August 1977.

Crude oil imports play a dramatic part since June 1974, they have risen in volume by 56 per cent. and value by 310 per cent. The Portuguese deficit for consumption is reflected in car import figures (up 280 per cent. in volume and 400 per cent. in value in three years). Portuguese petrol is now the most expensive in Europe, at \$1.62 a gallon, yet the roads are jammed with private cars.

The present generation, to a substantial degree, is paying the price for economic inertia by past Governments.

Tourism picked up almost miraculously this year, bringing in over 90 per cent. more than 1976, and is still filling Lisbon hotels at this late, rainy

Political uncertainty has aggravated the doubts of private management. Wildcat and official strikes have cost Portugal a fortune in man-hours.

co-operatives in the grain belt, bad winters, and general fears of small farmers in the north, Cattle, poultry and pig breeding has been plagued by low investment, slayings of herds by

collectives to pay for farm machinery, and persistent outbreaks of swine fever or foul pest.

In general, because of political problems, rising prices of raw materials, labour disputes, or personal difficulties in adjusting to the change in outlook brought by the military coup of April 1974, Portugal's productive record is bleak.

The country is being crippled by its reliance on imports to Portugal gets a massive IMF meet rising demands of domestic loan, it will be no more than a stop-gap. Unless Portugal can

consumption (produced by abrupt-rising wages in 1974-75), find a means of drastically increasing production, attracting goods and basic need for the foreign investment that will food it consumes.

On the positive side, bank trends of the past, when Portugal deposits have risen this year, was used as a host country for bank and bank credits to companies low-cost component manufacture, have increased. Citizens are putting their economic and financial

accounts rather than sugar jars. Not everyone is prepared to or tea caddies. Tax revenue has also increased — by 36.5 per cent. in 12 months. However, hopes of international financing

On the negative side, bank deposits have risen this year, totalled Portuguese businesses say, lateral, these days, is her gold: 785.8 tonnes, 35 per cent. of

one of low revenue as high which are already mortgaged to the past two years. A

handed to-day's Socialist government by the 1975 revolution civil servants, subsidies to the publicly-owned companies, in which swept 18 banks into the State's hands. These banks acted in new plant for these

monopolies which literally decolonised (with over Treasury currency stabilisation covered everything from soup to nuts and bolts. integrated into Portuguese six-month period.

Spanish Prime Minister arrives in London to-day

BY ROBERT GRAHAM

MADRID, Oct. 18.

SR. ADOLFO SUAREZ, the Spanish Prime Minister, leaves

for London to-morrow on

the first official visit by a Spanish

Premier to Britain since the

civil war.

Apart from its symbolic

significance the visit is

primarily designed to underline

the new Spanish Government's

desire to be considered part of

a democratic Western Europe,

and in particular its earnest in

seeking quick acceptance as a

member of the EEC in

particular France and Italy.

The present tour is the second

leg of a formal tour of European

capitals undertaken by Sr. Suárez

in the wake of the Spanish

elections in June. The first leg

at the end of August, was taken

up with visiting those countries

whose interests were liable to be

directly affected by Spanish

members of the EEC, in

particular France and Italy.

The present tour took in

London and Dublin and was to

have included Luxembourg, but

this stop was deleted last week

due to Sr. Suárez's pressure of

work at home. The tour is being

treated in a month, rather

than a month, reflected

a atmosphere than the first

British, that of Spain's

emergent democracy, has taken

an enthusiastic view of Spanish

membership of the EEC, viewing

this in largely political terms, as

opposition political parties. They

argued that his motivation was

to drum up support for

Spain over the EEC to

enhance his own prestige and

that of his Centre Party, UCD,

at the expense of the others.

Although Sr. Suárez will be

anxious to obtain full British

membership of Spanish EEC

membership during this visit,

the period more important in

Spanish eyes is to obtain some

idea from the British of how

they view the timetable of

Spain's application.

Spain is politically and eco-

nomic the most important of

the three European states whose

applications are before Brussels,

but Spain's application is the

most recent, behind those of

Greece and Portugal. It will

also be important for Sr. Suárez

to obtain a reading of Britain's

own stand regarding a reform

of the CAP given the possible

enlargement of the Community

to include three new Mediter-

ranean states.

Sr. Suárez is expected to raise

the question of the future of

Gibraltar. When Dr. David

Owen, the British Foreign Secre-

tary, visited Madrid on Septem-

ber 7, the two sides were

able to have a thorough airing

of the issue. However, contrary

to some speculation in the local

Press here, no initiative emerged.

It was suggested at the time

that Spain would restore teleco-

munications between the two

countries and the mainland as a gesture to

substantiated forecasts.

The Chancellor's angry outburst, on

September 7, in a speech to the

political party of April 1974, Portugal's productive re-

cord is bleak.

The country is being crippled

by its reliance on imports to Portugal gets a massive IMF

meet rising demands of domestic

loan, it will be no more than a

stop-gap. Unless Portugal can

consumption (produced by abrupt-rising wages in 1974-75), find a means of drastically

increasing production, attracting

goods and basic need for the foreign

investment that will food it consumes.

On the positive side, bank trends of the past, when Portugal

deposits have risen this year, was used as a host country for

bank and bank credits to companies low-cost component manufac-

ture, have increased. Citizens are putting

their economic and financial

accounts rather than sugar jars

or tea caddies. Tax revenue has

also increased — by 36.5 per cent.

in 12 months. However, hopes of international financing

rise in revenue. As of August

this year the deficit totalled

Portuguese businesses say,

August 1976. But Portugal's only secure col-

ateral, these days, is her gold:

785.8 tonnes, 35 per cent. of

one of low revenue as high which are already mortgaged to

the past two years. A

further 46.2 tonnes was sold to

the U.S. recently to repay an

emergency loan from the U.S.

Treasury

AMERICAN NEWS

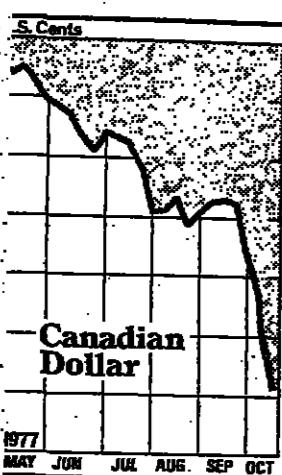
Canadian \$ slumps to lowest level since early 1930s

By JAMES SCOTT

TORONTO, Oct. 18. CANADIAN dollar has now reached its lowest level relative to the U.S. dollar since the early 1930s.

In the first two days of the week, it fell by nearly one cent to just above 80 U.S. cents. This is further to fall about two cents last week. October of last year it was 13 cents.

A sharp fall in the past week was triggered by comments Jean Chrétien, the Finance Minister, repeated on Monday in a statement, that the Government does not keep its hands out of the market and would not intervene to support it. He also repeated



Canadian does not intend to use exchange controls, as has been rumoured for the past two weeks.

The decline in the past week, attributed by foreign exchange traders to a variety of reasons, as over-large commercial risks for U.S. dollars, a rumour cut in the bank rate, and risk of external bond conversion. But a number of traders are speculative trading for a profit.

Most analysts seem to agree that the merchandise trade surplus will amount to about \$2.5bn. this year, but the deficit on the services account—notably net interest and dividend payments and an adverse balance on the travel account—has been rising rapidly and probably will be about \$7bn. in 1977.

The inflow of capital this year has not been sufficient to cover the deficit. During the past 12 months, Canadian foreign exchange reserves have been drawn down by \$700m. to \$4.5bn. at the end of September.

The Government has been reluctant to draw heavily on the exchange fund to support the dollar, and M. Chrétien says that it has no intention of asking the International Monetary Fund or other countries for reserves to support the dollar.

While most foreign exchange traders argue that the Canadian dollar will be higher in five or six months than it is today, few profess to know how far down it will go before.

Pay, price controls to end

OTTAWA, Oct. 18.

GENERAL wage and price controls will be ended early next year, Queen Elizabeth said in a speech opening Parliament. In her speech, drafted by the government of Prime Minister Pierre Trudeau, she said that the controls will remain the trolley programme through the end of 1978 and will be phased out by a pay and prices monitoring agency. Controls are not scheduled to expire until December 1978. In the meantime, the Government also aims to boost employment, encourage business investment, promote exports.

The Queen said that the government may provide oil and gas companies with more tax incentives to further encourage exploration and development. The government will put more Parliament new oil and gas regulations setting out rules for agencies.

Shah to visit Washington

Strike ends in Dominica

By Tony Cozier

WASHINGTON, Oct. 18. THE SHAH of Iran will pay an official visit to Washington in mid-November, Administration officials said today. His meetings with President Carter are expected to cover security in the Gulf and other issues.

Congressional reservations about Iran's arms purchases, totalling almost \$20bn. in the S. in the past five years, came to the fore today in an action taken by the Senate Foreign Relations Committee. The committee passed a resolution telling President Carter that further sales of sophisticated weapons to Gulf countries will be in trouble if Congress until he provides a long-awaited study on their impact in the region.

Mr. John charged that the strike was politically motivated.

World Bank travel row

By OUR OWN CORRESPONDENT WASHINGTON, Oct. 18.

SENIOR officials of the World Bank have used the Concorde supersonic airliner about 500 times in the past year, a bank spokesman confirmed today.

The bank's comment follows a four week study of the travel costs of the U.S. Government and the World Bank by an American news agency. This survey concluded that the American Government spends some \$2.7bn. a year on air travel. Last year the bank spent about \$12m.

Bank officials strongly defend the use of Concorde but privately some acknowledge that it does not improve the image of the organisation on Capitol Hill. Many Congress-

SEC plans options investigation

By Our Own Correspondent

NEW YORK, Oct. 18.

THE U.S. Securities and Exchange Commission (SEC) today announced a major investigation into abuses in the stock options markets. The agency, which is primarily responsible for regulating U.S. securities markets, including options trading, said that it is moving towards rejecting plans by several stock exchanges to expand or initiate trading in options.

The SEC said it was proposing a temporary rule that would have the effect of freezing the status quo in options trading.

It added that it is taking the step because of serious concern that major Federal securities law violations had been occurring in the options markets.

The Commission said its investigation might lead to new rules to protect investors and maintain fair and orderly markets. The SEC has been deeply concerned about the regulation of options markets.

Last July the Commission announced a moratorium on the expansion of trading programmes in options which are currently traded on markets run by the American Stock Exchange, the Chicago Board Options Exchange, the Midwest Stock Exchange, the National Association of Securities Dealers and the Pacific and Philadelphia Stock Exchanges.

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OVERSEAS NEWS

Power workers in Victoria strike again

BY KENNETH RANDALL

ABOUT 2,300 maintenance workers in Victorian Government power stations went on strike "indefinitely" today, threatening to precipitate the most serious industrial confrontation in Australia of the past 30 years.

The power station workers began a strike 11 weeks ago, and had been back at their jobs only since last Thursday before attempts to settle their wage dispute broke down this morning.

The brief resumption had done virtually nothing to restore the severely-depleted electricity output in Victoria, which had already brought industry in the state close to a standstill, cut transport, radio and television services, and forced power rationing at homes.

There being no apparent avenue for a settlement, in the spirit of "we can't just throw up our hands and say there's nothing more to be done,"

One of the biggest problems for the union leaders is that the dispute is predominantly in the hands of local shop stewards in the Latrobe Valley, about 80 km from Melbourne, where most of the power stations are. This would also make the security more difficult to maintain in the close-knit valley communities, if the government did introduce non-union labour.

The Federal government began taking emergency measures today. Letters were sent to each striker by the State Electricity Commission (SEC) telling them that, unless they were back at work by Friday, they would be regarded as having turned their backs on their members.

SEC has placed advertisements in newspapers for new workers who would have to be non-members of unions or members

CANTERRA, Oct. 18.

BY OUR FOREIGN STAFF

ZAMBIA yesterday gave its first public confirmation that Mr. Roland (Tiny) Rowland was the middleman who organised last month's secret meeting between Mr. Ian Smith, the Rhodesian Prime Minister, and President Kenneth Kaunda of Zambia. Mr. Rowland is chief executive of Lonrho, the London-based conglomerate with wide interests in southern Africa.

However, mystery persists about the role that Mr. Rowland is playing in the Rhodesia issue. He again flew into Lusaka, the Zambian capital, last night, apparently ferrying top presidential aides and Zambia was continuing its support of the Patriotic Front and

game lodge in the Luangwa Valley Park, eastern Zambia. Official spokesman refused to say what he was doing in Zambia with the same Grumman Gulfstream 2 executive jet aircraft that brought Mr. Smith to Lusaka on September 25.

The Zambian Prime Minister, Mr. Mainza Chona, told Parliament earlier yesterday that Mr. Rowland had "arranged" the Mr. Smith-Kaunda meeting and had offered his Swiss-registered executive jet aircraft to ferry Mr. Smith to Lusaka. But Mr. Chona said nothing had come out of the encounter and Zambia was continuing its support of the Patriotic Front and

its armed efforts to end white minority rule in Rhodesia.

Mr. Smith had proposed "major adjustments" in the Anglo-U.S. peace plan for Rhodesia, but Mr. Kaunda had found these "retrograde," Mr. Chona did not go into detail, but there has been speculation in Lusaka that Mr. Smith is trying to promote a moderate coalition of black nationalists that would exclude Mr. Robert Mugabe's militant Zanu organisation which provides the biggest guerrilla army in the Rhodesian conflict.

Mr. Chona said that there had been more than 60 border incidents between Zambia and Rhodesia and South

MALAYSIA'S RULING PARTIES

A coalition splitting at its seams

BY WONG SULONG IN KUALA LUMPUR

MALAYSIA'S ruling national UMNO to the English-educated front, a grand coalition of 11 élite and administrative groups, is splitting at its seams. Since 1959, the Malays of Kelantan, the most populous state, have, with their peculiar sense of cast, serious doubts whether the pride and conservatism, have partners will still be partners always returned the Party Islam, when they go to the polls, to power, despite all the care, widely expected to be held dangled in front of them either in April or August next UMNO.

The rift could open up a for so long, the Party Islam period of communal politics and finally succumbed to the late Tu instability not seen since the Razak's inducements in 1972 in Malay-Chinese racial riots of join the national front—the last

Mr. Sam Nujoma, president of the South-West Africa People's Organisation (Swapo), today offered cautious encouragement to the five Western members of the UN Security Council to continue their efforts at a negotiated solution with South Africa of the problem of Namibia (South-West Africa).

But

in

the

WORLD TRADE NEWS

West German imports of U.K. goods soar 22%

BY GUY HAWTHORN

BRITAIN'S exports to West Germany rose by 22 per cent in the first eight months of the year. Growth appears to Middle East oil and a source of supply closer to home from the Federal Republic's imports partner has obvious advantages. The market is substantially higher in the first six months of the year than the position 12 months earlier. Oil imports from Britain rose by 10.5 per cent, from DM373.3m (£37.8bn.) to DM441.5m (£37.8bn.).

The figures, abstracted by the British Embassy commercial attaché in Wiesbaden, do not provide a sector-by-sector breakdown of the boosted British exports of individual raw materials to the U.K. exports have been substantially boosted by shipments of North Sea oil to West Germany.

However, there must be strong grounds for suspicion that, as in the first six months of the year, U.K. exports have been substantially boosted by shipments of North Sea oil to West Germany.

If this is so, it will come as something of a disappointment to British trade officials who had been hoping for export growth in the first half of 1977 to be led by the finished goods sector. After all, it is to the oil-rich industrial sector that the British Government is looking for this trend to continue. The January to August growth in the first half of the year has been maintained, with exports increasing by 8.8 per cent, above the 6.8 per cent average increase in the first six months of the year. But for the Germans it had made sound sense to benefit eight months.

Renault offshoot to build truck plant in Pakistan

BY IQBAL MIRZA

THE Government of Pakistan and Saviem of France, a subsidiary of Renault, have signed an agreement to set up a commercial trucks manufacturing plant in Pakistan.

The project will involve a total investment of about \$275m. and will eventually manufacture 6500 trucks, chassis and diesel engines per annum utilising the latest technology available in the field. Saviem will provide machinery and technical assistance while a major portion of the foreign exchange component for the project will be met through loans from a consortium of French banks.

The project, the largest of its kind in the field of engineering in Pakistan, will not only meet domestic requirements but will also serve other areas in the Middle East. Saviem has also granted to Pakistan rights of sale of Saviem products in the region.

The manufacturing enterprise, a joint venture with Saviem, will ensure continuous co-operation and flow of technology in this field from France to Pakistan. Meanwhile, according to the State Bank of Pakistan, French

KARACHI, Oct. 18.

France in Olympics deal

BY DAVID SATTER

THE French electronics firm GIE has received a Frs 120m. order for equipment contract estimated at Frs 200m. and materials for construction of an oil pier at the Black Sea port of Novorossiysk.

The work on the new pier, from which a 250,000 tonne oil tanker will be able to be loaded in 40 hours, must be completed by the end of the year. An agreement worth about \$5m. has been signed between Dunlop and Licensintorg, the Soviet licensing organisation, for the production of latex foam in the Soviet Union.

French technicians will assist in the installation of equipment for the television centre which the Soviets have said will be the largest of its kind in the world. Thompson CSF has co-operated with the Soviet Union in television for the last 20 years and 80 colour television cameras are now in operation in the Soviet industrial system.

In another Franco-Soviet contract, the French company Dunlop's Dunlopillo division in Union Industrielle and d'Entreprise last year.

MOSCOW, Oct. 18.

Soviet talks with R-R

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

THE Soviet Minister for the Gas Industry, Mr. S. A. Ordubayev, yesterday met Sir Kenneth Keith, chairman of Rolls-Royce, in London, for talks on possible further Soviet orders for engines for gas-turbining purposes.

The Soviet Union a year ago placed a \$100m. order with the Choborov consortium, which includes Rolls-Royce, Cooper-Bessamer and Williams International, for Avon gas-pumping engines for a 600-mile Siberian pipeline.

The Soviet Union is now interested in buying more of these power-plants, and possibly will expand from \$5.5bn. in the period 1977-78 to \$14bn. in the period 1978-80.

OTTAWA, Oct. 18.

THE Canadian Department of National Revenue Customs and Excise has ruled that stainless steel from Japan, West Germany and South Africa is being dumped on the Canadian market.

The ruling applies to stainless steel plate from the three countries and stainless steel sheet from both Japan and West Germany.

Excluded from the ruling on sheet is cold rolled sheet in grades AISI (American iron and Steel Institute) 409, AISI 410S and AISI 434. The stainless steel investigation was the last of three steel import probes by the Carter Administration's decision to proceed with tough enforcement of the U.S. anti-dumping law in steel import investigations.

Previously the department made dumping determinations on structural steel of various types from Britain, France, Japan, South Africa, Belgium and Canada.

Ottawa, Oct. 18.

Vickers wins \$1m. orders for analysers

By David Fishlock
Science Editor

FRANKFURT, Oct. 18.

The January-August figures show that overall British exports to the Federal Republic went up by 21.8 per cent from the previous year's DM5.45bn. to DM6.54bn. (£1.85bn.). At the same time, the Federal Republic's total imports rose from DM144.15bn. to DM154.02bn. (£37.8bn.).

This performance substantially increased the U.K.'s share of the rich West German market. It rose from 3.8 per cent in the first eight months of 1976 to 4.3 per cent. In August the market share increased even more steeply and Britain's exports, in the first half of the period, DM918.4bn., accounted for 5.2 per cent of the Federal Republic's total imports.

Despite this disappointment, Britain's exports of wholly manufactured goods have also been increasing at an above average rate. In the opening six months of 1977 they rose by 10.5 per cent (compared with 1976) to DM2.24bn.

Government is looking for this trend to continue. The January to August growth will get the economy moving once again, and rate should continue to be well eventually, reduce unemployment. The 12.8 per cent average increase in the Federal

This trade, however, has been a two-way street. West German exports to Britain have also been growing fast. During the eight months they increased by 18.3 per cent from DM7.75bn. in the comparable period of 1976 to DM9.21bn. (£2.29bn.). During this period, overall West German exports increased by 7.6 per cent.

Germany's share of the U.K. import market also rose from the eight months of 1976 to 9.2 per cent. In August it rose further to 5.3 per cent.

The Federal Republic's performance widened the visible nicks' Auto-Analyzer, of which there are estimated to be nearly

period—it rose from DM2.33bn. in the opening eight months of 1976 to DM2.57bn. (£539.3m.).

EEC check on Comecon trade deals

BY KEVIN DONE, CHEMICALS CORRESPONDENT

THE EUROPEAN Commission is to consider ways of monitoring and compensating trading deals with Comecon countries.

The deals, in which more and more of the large plants being built by West European, U.S. and Japanese contractors in the Eastern bloc are to be paid for technology by announcing yesterday that it had won orders worth more than \$1m. a for a system that doubles the productivity of automatic medical assay methods.

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HOME NEWS

Imps launches bitter attack on Government

BY STUART ALEXANDER

THE GOVERNMENT is sharply attacked by Imperial Tobacco for ambivalence over tobacco substitutes. Imperial tobacco substitute is encouraged as sheer nonsense—the Government describes as "often in temperament, progress towards their declared objective of 'safer NSM'." Imperial's embittered attack on the Government, the HEC and the Press follows a near total flop for the cigarettes containing substitutes. Gallaher and Rothmans brands use the U.S. made Cytrel.

The industry expected that at least 60 per cent of smokers would try the new cigarette, but only about 15 per cent did so. It also expected that substitutes would quickly take about 6 or 6 per cent. of the market. Instead, it now seems that the 12 brands launched on July 1 may have between them a total of about 1.8 per cent, and many in the industry expect this to drop further before it improves.

The move follows an approach through additional research and by the Imperial Tobacco chairman, Mr. Tony Garrett, to Mr. Roland Moyle, Health Minister, to say the least, disappointing

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Rio Tinto seeks extension of company affairs privilege

FINANCIAL TIMES REPORTER

RIO TINTO-ZINC is seeking a significant change in the law on company affairs privilege to the oral testimony of its employees when this testimony is related to the affairs of the company.

The contention is that where an employee's knowledge is gained in the course of his work, any evidence he may give about it is the evidence of the company.

Such an extension to the law would rescue RTZ from a precarious situation. At present documentary evidence requested by the U.S. court is covered only by a privilege based on the nature of the documents.

The submissions made on behalf of RTZ include an argument not raised in lower courts that the privilege is only a thin protection if accepted by the Law Lords.

cannot be prosecuted under EEC law, but they are obliged to give oral evidence about matters which could be covered in the documents.

However, the main argument in RTZ's appeal relates to the purpose for which its evidence is required in the Richmond court. It is contended that the request for evidence is simply a front for an attempt by the U.S. Department of Justice to obtain information for anti-trust investigations being conducted in grand jury proceedings.

In the U.S. Grand Jury proceedings are of a criminal nature. Therefore they do not

it is argued, fall within the scope of international agreements which require British courts to help foreign courts wishing to hear U.K. witnesses.

MORE THAN 3m. people will be eligible for help with electricity bills this winter. But the scheme will be none for arrears of payment with criticism from voluntary organisations.

Following yesterday's statement by the government, the scheme which had been pressing

supplementary benefits and later the organisations issued a joint statement recording

announced yesterday by the fundamental disagreement with the scheme.

With the basic payment of £5 will be made automatically in the week beginning January 16. The Family Welfare Association, second part will be a discount

National Consumer Council, equal to a quarter of the winter's electricity costs, minus the payment of £5 assuming the total

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How did North Sea oil get where it is? Picture an enormous compost heap, working under pressure for 280,000,000 years."

Mobil geophysicist Ian McClelland likes to amuse friends who ask how North Sea oil was formed, with the compost comparison. Actually, his answer isn't too far from the technical truth.

The North Sea covers a collection of geological basins hundreds of millions of years old, in which heat and pressure have turned organic matter into oil and natural gas.

Some organic matter, together with particles of rock, has eroded from the land surrounding the sea, and settled in the basin to form layers of sandy sediment on the bottom. Then too, over aeons, a steady rain of marine animals has fallen to the sea bottom. Their remains have mixed with the sediments.

"Over millions of years", says McClelland, "these sediments have piled up and up. Their weight actually causes the basin itself to sink. And so the process goes on".

Pressure created by this weight, combined with the heat at great depths, can create the conditions under which oil and gas are sometimes formed. It is something like a sophisticated garden compost heap breaking down, miles under the sea bed.

The oil and gas at first are scattered throughout the sediments; but eventually

become concentrated in certain areas. "These are the 'oil fields' everybody talks about", explains geophysicist McClelland. The same pressures and heat which help generate oil and gas also work on the sandy sediments, compressing them into rock. Fluids in the newly-formed rock are partially forced out and percolate upwards through interconnected pores. These fluids are sea water and the newly formed oil and gas.

The oil and gas are lighter than the sea water and, over millions of years, migrate upward through the rocks as long as a path is open to them. A great deal of oil and gas is trapped where solid layers of rock block its upward movement, creating a potential petroleum reservoir.

The great fields of the Middle East, South America, the Southwestern United States, Indonesia, and Alaska were created by the same process. Mobil has been a major participant in all these areas.

"Oilmen knew from seismic readings and from drilling around the edges that the North Sea had covered 'ancient basins'", says Ian McClelland, "so they knew the sedimentary history essential to the formation of gas and oil was there".

Onshore, at the edge of one North Sea basin, the Dutch found large gas deposits in 1959. By the early 1960s, oilmen were ready to tackle the North Sea, and Britain licensed the first drilling in its sector.

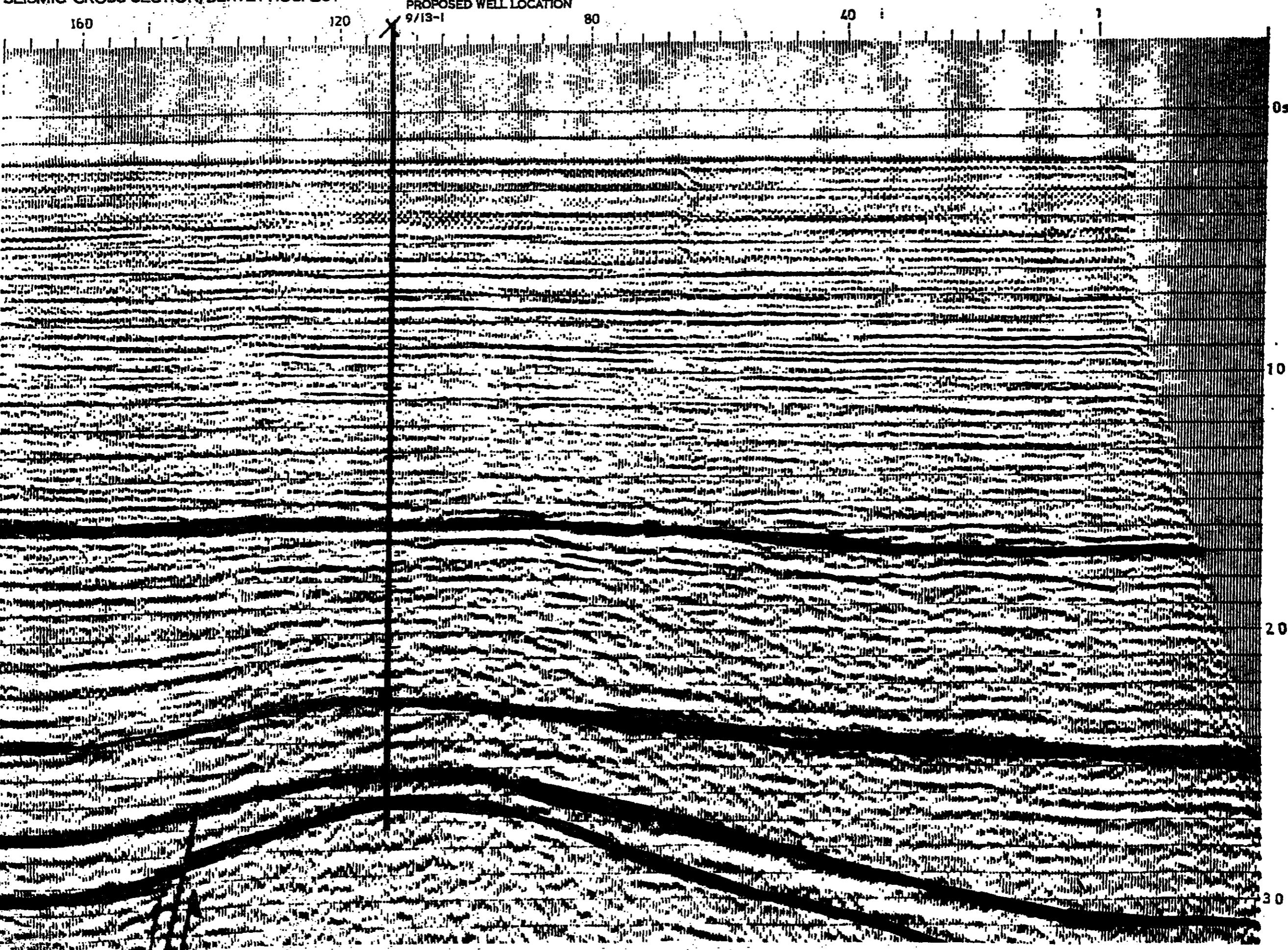
"We felt we knew where gas could be found, based on the experience in the Netherlands", McClelland recalls. "And our ideas worked in the southern North Sea, where large gas fields were found in conditions like those on the Dutch mainland". When gas exploration reached maturity, the search shifted naturally to the North. In 1969, a significant oil well was tested in the Norwegian sector. Soon after, Britain's first oil field was confirmed.

Geophysicist Ian McClelland and his colleagues, we are happy to say, have led Mobil to an important discovery in the North Sea—the Beryl field.

Mobil

No. 2 in a series on North Sea operations.
For the complete set, write to Mobil North Sea Limited,
Mobil Court, 3 Clements Inn, London WC2A 2EE

SEISMIC CROSS-SECTION, BERYL PROSPECT



HOME NEWS

Record shipping losses in 1976

BY IAN HARGREAVES, SHIPPING CORRESPONDENT

A RECORD amount of merchant shipping was lost last year through accidents. The tonnage condemned, broken up or converted was also a record.

Lloyd's Register of Shipping's register of casualties in 1976 shows that 345 ships or 1,156,109 gross tons were either reported foundered, missing, burnt, wrecked, lost or involved in collisions. This compares with 955,261 tons (336 vessels) the previous year.

Losses due to wrecking almost doubled during the year and included the largest ship ever lost through casualty, the Olympic Bravery.

This and other incidents increased government concern during the year at the pollution risks involved in accidents to oil-carrying vessels and has led to pressure for governments to legislate in favour of compulsory double-hulls for such vessels.

Forty-eight per cent of last year's losses involved 32 oil tankers and 11 per cent bulk carriers.

Big offices project planned for City

FINANCIAL TIMES REPORTER

PROPOSALS FOR one of the largest property development schemes in central London for several years are now being considered by the City Corporation.

The special trustees of St Bartholomew's Hospital, in partnership with a George Wimpey-backed development company, Jafion Properties, plan an office and residential development near the new London Museum in London Wall that could cost around £30m.

Bart's trustees, successors to the now disbanded Board of Governors, have become involved in the project in order to provide more than 100 central London flats for hospital staff.

Extra powers planned for London boroughs

BY LYNTON MCALPIN

LONDON BOROUGH councils may gain extra powers as a result of proposed changes in planning regulations being drawn up by the Greater London Council.

The result, the GLC claims, could be to speed the processing of planning decisions in the surrounding planning system.

Talks are planned between the council, the London Borough Association and the Department of the Environment.

Gas prices unrealistic -Shell

A SENIOR Shell executive has criticised governments in Europe and the US for failing to impose realistic gas prices, writes Ray Daffer.

Mr. Peter Baxendell, managing director of the Shell group, said: "I know of no cases in the world to-day where import gas, whether by pipeline or as liquefied natural gas, is priced at its full and true market value."

There was still an "understandable" reluctance by governments to see gas prices rise to oil-equivalent levels, let alone to accord gas any premium over high sulphur fuels which it deserved.

The situation will undoubtedly change, however, and as gas attains its rightful competitive pricing position in the energy-rich world, "we are going to see a dramatic expansion in the international trade in gas," Mr. Baxendell told the Australian Academy of Technological Sciences in Canberra.

Bigger war pensions

By Eric Short

WAR PENSIONERS are to receive a 14 per cent increase from November 14. Mr. Alf Morris, Minister for the Disabled, confirmed yesterday. An order authorising the increases is to be published today.

Details of these latest rises in war pensions were given in May together with the latest uprating in old-age pensions and other social security payments, also to take effect from November 14. The rate of increase is based on the government's estimate of inflation from last November to next November—13 per cent plus a further one percentage point.

Notts. 'a leader in crime'

A NOTTINGHAM magistrate, Mr. James Swainson, told Mr. Justice Bush, who arrived in the city to preside at the crown court that Nottinghamshire, together with Merseyside and London, had become one of the top three areas for indictable offences.

Mr. Swainson, making his traditional address to a High Court judge on circuit, said indictable offences in the county were now running at 7,000 for every 100,000 of the population.

Projects raise companies output

By Ray Pernam, Scottish Correspondent

PRODUCITIVITY increases of a third and more have been reported by companies which have designed jobs to give employees more responsibility and to reduce the amount of boring and repetitive work.

Three years ago the Government, TUC and Confederation of British Industry set up a tripartite working group to encourage companies to consider ways of organising for more job satisfaction. But, in spite of good results by those who have tried, progress has been slow.

Liberia sent most tonnage to the breakers with almost 300,000 tons, followed by the U.K. (1.1m.), Greece, Panama and Japan.

But the part resolution of Bart's accommodation problems is overshadowed by the massive scale of office space in the proposed development.

It is believed that an office development permit for 380,000 sq. ft. has been granted for the site. London architects, Fitzroy Robinson and Partners, plan an office and residential development near the new London Museum in London Wall that could cost around £30m.

Bart's trustees, successors to the now disbanded Board of Governors, have become involved in the project in order to provide more than 100 central London flats for hospital staff.

Wall site is critical to the City's new inner road plans. Any building proposals are expected to take account of the Corporation's scheme to redesign the road system at the western edge of the Barbican buildings.

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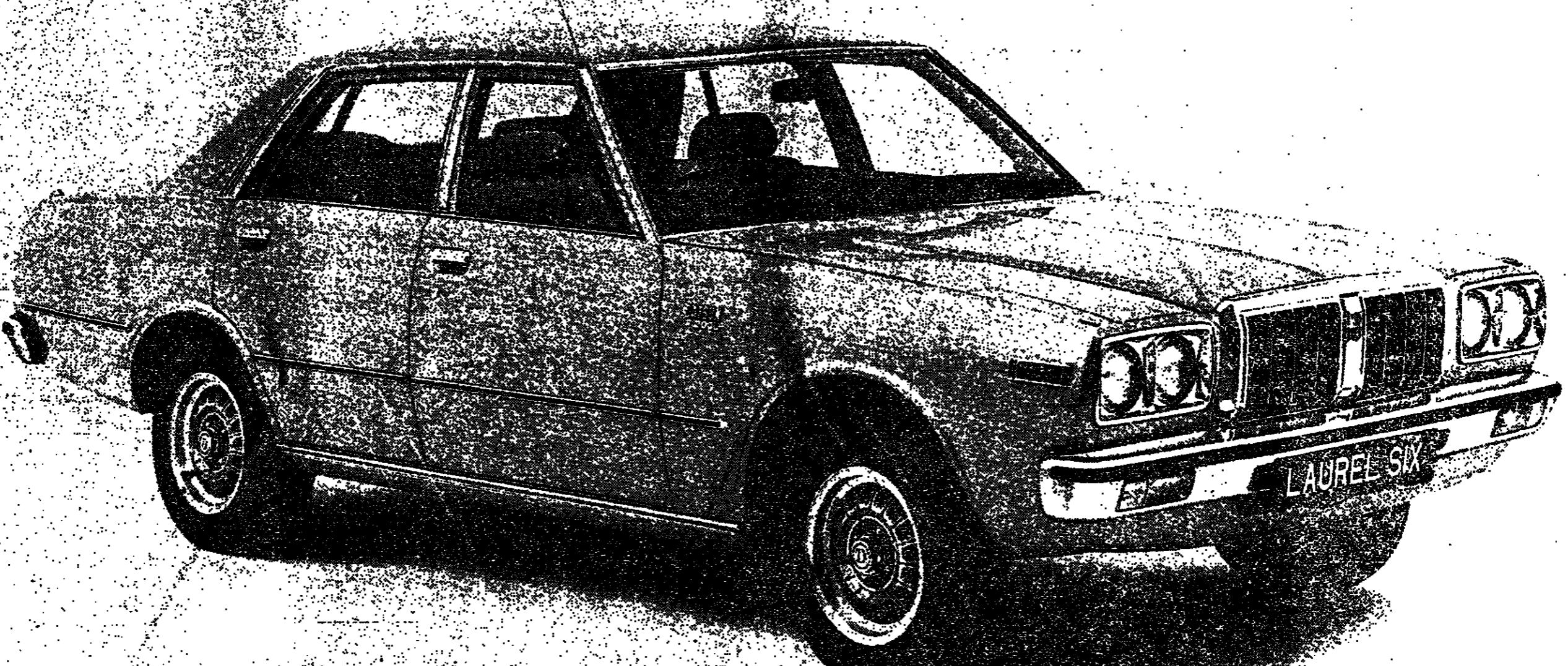
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Wall site is critical to the City's

If the engineering of the Mercedes 200 impresses you,
 Or the luxury of the Peugeot 604 appeals to you;
 If the safe design of the Volvo 244 reassures you,
 Or the styling of the Audi 100 attracts you;
 If the smooth performance of the BMW 520 excites you,
 ...and you want an executive saloon with an extremely
 high level of equipment, Datsun presents...



The New Laurel Six!

Because the New Laurel Six gives you meticulous Datsun engineering, with the luxury of "soft-touch" cloth upholstery and thick carpets; the very latest safety techniques and features for your protection; crisp up to the minute styling; the performance of a smooth and powerful 2-litre, 6 cylinder engine; and a full complement of high luxury equipment from fibre optic head and tail lamp monitors to a quartz digital clock!

Datsun engineers are precise people. What they design on paper they reproduce exactly in the factory, not accepting any compromise for the sake of mass-production.

And with the New Laurel Six they set out to offer the best executive car qualities in one impressive 2 litre luxury saloon. Now you can see how well they have succeeded.

High quality engineering is immediately apparent when you see the superb finish of the New Laurel Six and hear the quiet "chunk" as the doors close.

The luxurious interior is spacious and supremely comfortable. Deeply upholstered seats are scientifically designed to keep you in comfort, and the appointments are worthy of a car many times the price. There are wall-to-wall deep pile carpets, thickly padded head restraints for the front passengers and corner head rests for those in the rear seat; a push-button radio and auto-reverse stereo cassette

player to entertain you while you travel; a highly accurate quartz digital clock to keep you on time for business appointments; an economy indicator to help you drive at optimum engine efficiency; tilt-adjustable steering for your greater comfort; an array of warning lights, including one that will tell you if a passenger has not closed a door properly; a vanity mirror in the illuminated glove box; a special compartment for your favourite cassettes; superb alloy road wheels; and a host of other special features which your Datsun Dealer will show you.

The 2-litre overhead camshaft engine gives the New Laurel Six a powerful advantage over most of its competitors because it has the smoothness of 6 cylinders instead of the more conventional 4 cylinder unit.

The performance is as impressive as the rest of the car with a maximum of over 100 m.p.h. and economy in everyday driving of around 26/27 miles to each gallon of low-grade petrol.

Yet the New Laurel Six will not cost you anything like the £6695 of the Peugeot 604, or even £5729 of the BMW.

The New Laurel Six is priced at just £4095, which represents remarkable value for money for such an impressive luxury car.

The New Laurel Six executive saloon is on display at your Datsun dealer now. We think you'll find more reasons to want it than any other car in its class.

Prices quoted include Special Cor Tax, VAT and inertia reel seat belts.

DATSUN U.K. LIMITED, DATSUN HOUSE, NEW ROAD, WORTHING, SUSSEX. TEL: WORTHING 68561.

DATSUN

“Is it not time that we were all given the full facts in a clear and dispassionate way instead of being flooded with emotive propaganda...?”

Lord Winstanley, in an article on tobacco substitutes in The Times, October 12th, 1977.

Since tobacco substitutes were launched in Britain, at the beginning of July, there has been much news and comment on the subject.

Regrettably, much of this has been ill-informed; even more regrettably, much has been exaggerated and misleading.

We, the Board of Imperial Tobacco Limited, feel that the moment has come for our position to be made clear in public.

The History of NSM

By 1972 it had been established, after extensive research, that a product could be manufactured and used as a tobacco substitute, in ways which showed every promise of reducing risks that had been associated, by medical authorities, with the smoking of cigarettes.

Imperial Tobacco, following its policy of consultation with scientific and medical authorities, and of co-operation with Government, entered into discussion with the Government of the day on the future of this product.

The Government, without in any way compromising its long-term policy of discouraging smoking, agreed that this was an approach that should be pursued; and an independent body comprised of distinguished medical scientists (the Hunter Committee) was set up to enable judgements to be made on the potential value and safety of the new product.

Imperial Tobacco, in partnership with ICI, made a massive investment in research and development facilities; the product was tested and a new factory was built by Imperial Tobacco.

The Hunter Committee came to the conclusion that there would be no objection to the manufacture and sale of cigarettes containing NSM, and (having been supplied with formulations and

other details) cleared each proposed Imperial Tobacco brand individually.

Criticism of NSM

The introduction of cigarettes containing NSM has been followed by accusations, often in intemperate terms, of misleading the public—including accusations made on behalf of a body appointed and financed by the same Government with whom the policy which led us to introduce NSM was agreed.

These accusations are sheer nonsense.

The advertising for NSM was cleared in advance of publication by the Secretariat of the Hunter Committee at the Department of Health and Social Security. It was also cleared by the Advertising Standards Authority, as is all our brand advertising.

Government Policy

It has been accepted by successive Governments that a reduction of risks which the authorities associate with cigarette smoking should be achieved by making every effort to modify cigarettes in ways suggested by the responsible authorities.

On January 16th 1976 in the House of Commons, Dr. David Owen, then Minister of State (Health), reaffirmed the Government's position, when he said:

“Millions of adults are going to go on smoking for a very long time to come and the Government must in all its proposals and activities recognize this as a fact. It is on the reduction of the hazards to health among smokers that the industry and the Government can and should co-operate...”

“I have always rejected a strategy which fails to

understand the problems and difficulties of the confirmed smoker and that is only composed of restrictions, warnings and education.”

He continued: “The co-operation of the industry in any such strategy is important, for if they do not continue to put a heavy investment into experiments and research for safer cigarettes, we will not make rapid progress.”

The Company has at every stage acted in accordance with the spirit of this policy, and has co-operated to the full with the relevant Government and independent bodies.

Conclusion

Imperial Tobacco can play a part in the Government's policy, has played it, and is determined to play it in the future.

Imperial Tobacco believes that it has made a positive contribution to the Government's policy, thereby providing a basis for further progress through additional research and development.

It is, to say the least, disappointing that the Government has not stood by its own policy—a policy which actively encouraged Imperial Tobacco's investment of over £15 million in research, development and production related to NSM.

If unbalanced criticism of tobacco substitute is encouraged—even tacitly—by the Government, progress towards their declared objective of “safer cigarettes” can only be delayed—or even halted altogether.

Signed:
R.A. Garrett (Chairman)
 On behalf of the Board of Directors
 of Imperial Tobacco Limited

Imperial Tobacco Limited

Member of Imperial Group Limited

Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

• MINING

Laser helps to keep tunnels straight

LIGHTER and more compact the cradle itself is not critical when competing equipment, an since both vertical and horizontal alignment laser for tunnelling applications has been granted a class "A" flameproof certificate. It weighs 40 lbs including its mounting and can be dismantled into two sections for ease of carrying. Overall dimensions are 224 x 32 x 32 inches.

The laser tube is made of metal rather than glass and while this helps to dissipate heat it also reduces the effects of handling shocks.

Output is controlled at 125 microwatts per square cm and is in conformity with the requirements of the NCS and BS 4803 governing safe viewing.

Optical performance of the unit is such that it can give a symmetrical beam profile no greater than 50 mm in diameter at 500 metres. The collimated telescope has lenses specially designed for use with lasers.

Cradle design will cope with mounting on roof supports, walls or floor and the positioning of

• By agreement between the Financial Times and the BBC, information from The Technical Page is available for use by the Corporation's External Services as source material for its overseas broadcasts.

• PROCESSING

Pure water anywhere

TRAILER MOUNTED water purification equipment is capable of treating 6.5m. cubic metres (1450 gallons) of water per hour to World Health Organisation standard from differing raw waters, including turbid supplies having a high concentration of dissolved solids.

Proposed for major remote building sites or disaster areas, steering adjustments within plus or minus 10 degrees. Once the adjustments are complete, both axes are lockable and both cradle and laser unit are waterproof and dustproof.

Power supply required by the laser is 12 volts dc, 115 ac or 240 ac, depending on customer requirements. A twin-core, armoured flexible cable feeds the power to the enclosure through a standard flameproof gland.

The equipment has been developed by Applied Physics working closely in conjunction with potential users and it is something like 20 per cent.

The filtration/sterilisation section may be used separately if it is decided, after simple chemical tests, that dissolved solids reduction is unnecessary.

When the raw water is excep-

tional, reverse osmosis followed by sterilisation through a Chloropac electrolytic steriliser completes the treatment to produce notable water complying with WHO.

Further information on this new tunnelling laser from Survey and General Instrument Company, Fircroft Way, Edendene, Kent, Edendene (0732 71) 4111.

Portals Water Treatment, 632, London Road, Isleworth, Middlesex, 01-580 5199.

• DATA PROCESSING

Big machine battle lines drawn

WITH THE announcement that Mr. Peter V. Williams is to be the managing director of Amdahl (U.K.) and general manager of northern European operations, the Amdahl campaign to displace large IBM computers in Britain is expected to take shape very quickly.

Mr. Williams has 17 years experience of selling medium to large IBM systems and was undoubtedly the perfect choice for Gene Amdahl who was in Britain last week to talk to Diebold Research Program—Europe participants about the future of large machines. Not unnaturally, Amdahl—whose 470V/8 after a 30 per cent price cut in March is competing strongly with IBM's 165 and 168 as well as the newer 3033—does not think big machines are going to be exter-

minated by the minis or the would be impossibly expensive and slow. Evolution, not revolution, was the name of the game.

Meanwhile, IBM presenters of new machines with complex water/air cooling systems have contended that water cooling is a more efficient method of keeping banks of logic at the right temperature. Amdahl asserts that this cannot be so because of the steady decline to a point at which it has almost ceased to exist, except for the builders of special machines. Now there are two loom builders introducing shuttle looms that can compete in world markets.

One of these is British Northrop Sales, (Blackburn, Lancs. Tel: 0254 55253), which earlier developed a new type of shuttle loom, the Sensomatic, which is now selling moderately in world markets. The company has used this as the basis for a completely new rigid rapier loom which will be marketed as the Sensomatic Rapier Loom.

Instead of a shuttle the new machine uses two rigid rapiers manufactured from pencil-thin carbon fibre reinforced material.

The feature of the rapiers compared with those used in competitive looms is their very light weight and extremely high rigidity.

The rapiers enter the shed of the loom from each side and "kiss" in the centre, transferring the weft yarn from the giver to the takers which, as they withdraw, pull the weft across the full width of the cloth.

• TEXTILES

Looms face a revival

SINCE the Second World War the British loom building trade has been passing through a steady decline to a point at which it has almost ceased to exist, except for the builders of

big machines. Not unnaturally, Amdahl—whose 470V/8 after a 30 per cent price cut in March is competing strongly with IBM's 165 and 168 as well as the newer 3033—does not think big machines are going to be exter-

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• COMMUNICATION

Teleprinter has a brain

ADVANCED electronic circuit design is giving new capabilities to many run-of-the-mill pieces

of equipment in the communications industry. The latest unit to be given its own tiny brain is a teleprinter designed to operate over radio circuits.

The Philips STB 750 replaces the STB 75, which when it was launched in 1969, broke new ground in the area of error correction and detection.

With the new equipment, however, the selector, we call number—of special importance in unattended operations—can be entered by teleprinter. In the previous version this had to be done by means of thumbwheel switches.

Frequency drift up to 55Hz is automatically corrected, to meet the requirement of unattended operation for long periods. A frequency drift meter is incorporated.

The buffer store has been enlarged from 25 to 80 characters to facilitate operation under difficult conditions, when repeats are frequently requested. For use at coastal stations or in fixed point-to-point links, the buffer store can be enlarged to 12,000 characters with the aid of a simple plug-in card.

Philips Telecommunications Industry, P.O.B. 2, Hilversum, Holland.

• INSTRUMENTS

Monitors temperature

THE miniature four-channel tape recorder made by Oxford Electronic Instruments has been further developed for recording temperatures in food container vehicles and other temperature sensitive environments.

Unless for example is using the units to ensure that products are kept at the right temperature during storage and distribution.

Up to four channels with thermometer probes can be accommodated and the recorder, called Microlog, will operate continuously for up to 260 hours or in a sampling mode for periods in excess of six months. It is housed in a waterproof container measuring only 260 x 180 x 90 mm which also contains a control card with crystal oscillator for sample timing and a choice of dry or rechargeable batteries.

The stand-by current consumption is only 100 microamps, allowing long unattended operation.

A separate high-speed replay machine is available enabling the recorded data to be written on to a chart recorder or into a computer for analysis. More on 0235 21135.

TRACER PHONE

Integrated telephone and **CASS** paging

Cass Electronics Limited
Phone Egham 6266 for information

Initially this can be anything up to a maximum of 3cm, although 3.5cm looms will probably be built in a later stage of the development.

The new loom can weave up to eight different coloured weft yarns and may be equipped with cam, tapet, dobby or Jacquard patterning motions. By means of four change bobbins the loom is able to weave between 3.6 and 39 picks per cm. Cloths made on the new loom may be woven with either a tucked or fringe selvedge on both sides, and the machine will accommodate fabrics lengths up to a maximum of 60 cm. diameter on the cloth take-up.

The first commercial batch of the new looms should be ready by the end of the year when they will be supplied to various British mills for full evaluation.

PROGRAM FOR SUCCESS

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When you plan to expand or begin manufacturing in Britain, Cwmbran's experience can be of real value to you. Cwmbran is one of Britain's most successful industrial development areas. Cwmbran Development Corporation has built almost 50 factories in a diverse programme and made them all within a year. Already more than 210 industrial units have been completed in Cwmbran's industrial homes. We know the problems of relocation and have solved them.

London is only 90 mins. away by the new High Speed Train and only a little over two hours by M4. We are 80 mins. from the M6 and M5. We have 45,000 people employed, housing, schools and shops, and every facility for work and leisure. Modern factories and leased sites are still available, and the Corporation welcomes enquires from individuals in the U.S. or overseas who wish to expand in a beautiful area with the aid of Government grants.

Substantial rent concessions may apply. The key men who come with new industry can be housed in Cwmbran.

Get the facts. Please use the coupon or write or telephone today.

To R. P. Morley, M.B.E., N.C.C. Development Corporation, Green House, Town Centre, Cwmbran, Gwent, NP14 3JL, Wales. Telephone Cwmbran 67777.

Name _____

Position _____

Company _____

Address _____

FT21

How to identify the leading U.S. government securities firm

Test #1

Does the firm have enough stature to work with the Fed, the Treasury, and U.S. Government agencies?

Merrill Lynch Government Securities has played a leading role in developing and supporting many agency securities. Examples include GNMA Pass-Throughs, FNMA's, Federal Home Loan Bank bonds, and securities of The Farm Credit Banks.



Test #4

Does it make firm bids in good markets and bad?

In a month that included a good market (November, 1976), Merrill Lynch Government Securities had an average daily volume of \$2 billion. Even when things got tough (January, 1977), the figure was still impressive—\$1.8 billion.

Test #3

Does the firm offer direct access to primary money markets on a worldwide basis?

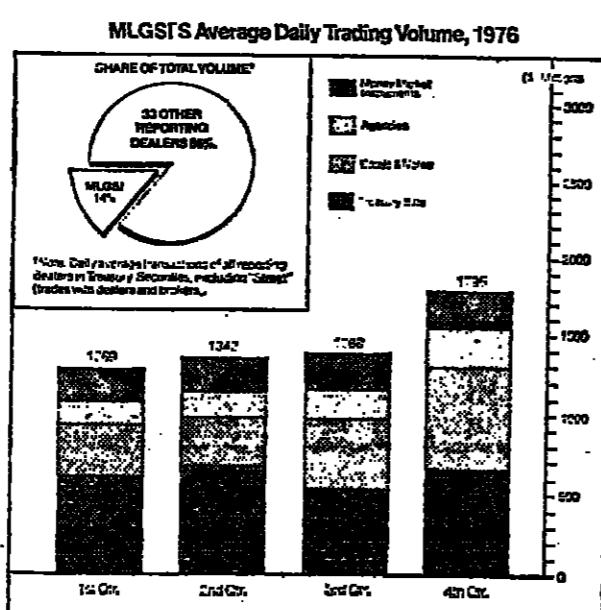
Merrill Lynch Government Securities deals with thousands of companies and institutions throughout the world. Not just those in or near major financial centers.

Test #5

Does the firm have a distribution system that reaches out to Main Street, as well as Wall Street?

Merrill Lynch Government Securities has trained 222 Account Executives employed by various companies in the Merrill Lynch group.

Located in 94 offices throughout the world, these Account Executives apply their special expertise to all kinds of government securities and related instruments.



Test #2

Is the firm competitive enough to have an average trading volume of over \$1.4 billion a day?

In 1976 Merrill Lynch Government Securities averaged over \$1.4 billion a day in trading.

On 30 days, trading topped the \$2 billion mark. On 3 days, it soared beyond \$3 billion.



The leading firm should do all these things. Not just a few. This firm does.

Merrill Lynch Government Securities Inc.

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حکما من الاصل

FINANCIAL TIMES SURVEY

Wednesday October 19 1977

Scope
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Ted Schoeters

Man are fragile creatures, tied to a small proportion of total land area of the planet, the physiological fact that a degree variation in blood temperature is all they can stand. But surface temperatures on earth fluctuate more than 150 degrees C.

Even now, poorly insulated and ventilated homes are being put up by local authorities and only a few tentative moves are being made by certain councils to experiment with advanced heat control equipment, including new designs of heat pumps. In all fairness, it must be said here that the Property Services Agency of the Department of the Environment has given an excellent lead on the control front by having an air conditioning system designed that will do away with one of the worst aspects of a highly insulated dwelling—its tendency to accumulate condensation in kitchens and bathrooms.

A hotel in Israel runs all its water supply system off the heat from air conditioning. The extra equipment needed to capture this heat and put it for water for baths and basins, is a minimal capital sum for any new design of a large building.

In the U.S., Material Distributors Corporation of Massachusetts says that 100 square yards of solar control film on the windows of a building can have a cooling effect equal to one of air conditioning equipment. The film cuts off a large portion of the infra-red radiation that would otherwise penetrate into the room, or the ice, during the summer and heat losses towards the exterior during the winter.

His plastics film is made by ositizing a very thin layer of aluminum in a plastics sandwich by the same process as used to put a translucent film of gold on the space-crafts of the U.S. space-crafts. The aluminum lets in per cent of the visible light

1970 energy needs of new buildings in the New York area used and the design of the structure, must faster than is necessary.

As offices more than doubled. So far as the latter factor is sary for comfort, though this is

the use of insulants such as

Apart from the fact that offices in this and many other areas of

the U.S. have been kept at in-

tolerably high temperatures during the cooler months of the year, they are also maintained at such low levels in the summer that the load on local utilities is so heavy as to cause the well-known "brownout" and sometimes a power failure covering a whole state.

Office buildings are no better, including the more modern ones which have full air conditioning.

Many have been designed with sublime disregard for solar heat loading, though bright sunlight even at external temperatures well below freezing can cause temperature gradients of tens of degrees between the sunlit side and the dark side of a building.

Yet energy control and power saving is only now being accepted as a criterion in the

selection of building materials.

their buildings ventilate at a convection and conduction. The

latter is controlled by mass and

concerned, it is estimated by admittedly a highly subjective

foamed plastics which have the

property of trapping large

volumes of air, itself a poor

choice of materials for building

for "energy efficient building" all incoming air is first super-

heated to the temperatures

demanded by the occupants, is

insulation built in — an four years. Installed in this

apparently simple task but one

way, these pumps operate like

refrigerators in reverse, collect-

ing heat from outside the home

and pumping it via a suitable

low boiling point refrigerant

chemical to a heat exchanger.

This is a U.K. project and it

Industrial Refrigeration and Air Conditioning

With energy conservation a major economic and social consideration, and a growing awareness of the benefits of better working conditions, there is considerable scope for improvement in existing refrigeration and air conditioning technology.



York/Borg-Warner packaged reciprocating chilling machines in use in the heat recovery system which provides air conditioning at the Bisham Abbey National Sports Centre at Marlow, Bucks.

For convection read—mainly "draughts" something which good building can reduce to negligible proportions. Then comes radiation, which is mainly through the glazing.

And a striking example of what

can be saved in operating costs

through energy conservation is

provided by the Toledo Edison

Building in which double-

leaved chromium coated glass

is used to reflect solar heat.

The glass cost \$120,000 more than

standard quarter-inch plate.

But the engineers were able to

reduce the capacity of the

building's cooling system by 65

per cent. the heating plant by

50 per cent. and the dis-

tribution ductwork by an astonishing 68

per cent. to provide a net

capital saving of \$1,000 and a

reduction in O. rating costs of \$40,000 per year.

This is a most encouraging

result, but it does not help

where buildings are under-

employed and one stay-behind

employee is using conditioner

power for his and many other

offices.

Because air conditioning and

refrigeration are vast con-

sumers of power, the Heat

Transfer and Fluid Flow Ser-

vice operated by NEL and

Harwell is to be extended to

companies who design and make

refrigerating and similar plant.

A new review panel with

international membership will

promote the production of a

handbook of design data, com-

puter programs and special

features of heat exchangers, etc.

Specifically, tube inplate designs

will be examined as will refrig-

erant behaviour, reduction of

energy consumption and the cor-

rosion of waste heat recovery

devices.

The peak of cool perfection

The cold facts are, that about 90% of all food consumed is process cooled, stored or transported by refrigeration somewhere along the distribution chain. It is equally certain that the majority of that total in the UK, has been so treated involving the use of Hall-Thermotank Products Limited refrigeration equipment. The same also applies to your favourite brewed beverage, some 90% of UK breweries are H.T.P. equipped, add to this the 80% or so of Lloyds registered shipping (whether built in 'oriental' or 'occidental' yards) that are fitted with our equipment and the Hall-Thermotank Products units to be found worldwide the scale of this wholly British company's operations begins to sink in.

Yet you will not find our name under your kitchen worktop. Despite this however, with our 100 years in the business we are considered to be the most experienced firm around, and if not the actual originators certainly one of the pioneers of industrial and commercial refrigeration.

Our products portfolio is the most

comprehensive available from a single source world wide. With a range of over 100 reciprocating compressors with a power range of 1/8th to over 750 hp. 80 different types of packaged unit, over 100 water cooling towers, over 70 varieties of heat exchangers and a sturdy range of line fittings to complement the main range and to give you the best possible refrigeration system money can buy.

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INDUSTRIAL REFRIGERATION II

Comfort at work can aid efficiency

THE EXCEPTIONAL summer of 1976 may have underlined the discomfort suffered in many factories and offices, but in most instances it did not reveal the problem for the first time. Indeed, many people were too hot at their place of work during the last miserable summer and others suffer all the year round.

Keeping cool is only part of the answer. Just as relevant in a wet island climate like our own is the need to keep the relative humidity down. Most people are only comfortable when the relative humidity is between 40 and 60 per cent. The average relative humidity in London during the summer is 70 per cent, so even when we have good summer offices and shops are uncomfortable.

Buildings gain heat both from within and the outside. Internal sources of heat include people, lights and equipment. Each person gives off between 100 and 150 watts which, with the office space now allowed to each having shrunk from around 200 square feet some 25 years ago to about 80 square feet now, is equivalent to about 1.2 watts per square foot. The problem is compounded by the low ceilings, which do not allow hot air to rise out of the way as in older Georgian-style offices.

Lights are also a significant source of heat. A standard tungsten filament 100 watt bulb releases about six watts per square foot, while more heat is released by electric typewriters, photocopiers, computers and other office equipment.

Usually more significant is the heat gain from outside the building. Direct sunlight radiates heat through the windows and the building stores the heat and re-radiates it inside. The micro-climates of the shopping and commercial centres are often as much as 10 degrees Centigrade above those in the countryside. These outside temperatures are quickly reflected inside adjacent offices.

Air conditioning is automatically thought of as the way of coping with the problem. But although as a general rule it is the most effective expedient, there are a number of other approaches to the problem. The most effective, doubtless, is a component central station equipment new office block or plant has fallen steadily from factory with all the relevant 61 per cent. in 1971 to 54 per cent. in 1975, the last year for which there are figures.

The most recent survey by the Electricity Council showed that the market share of the component central station equipment new office block or plant has fallen steadily from factory with all the relevant 61 per cent. in 1971 to 54 per cent. in 1975, the last year for which there are figures.

A number of factors are

Lighting can be made more

responsible for the increasing

attraction of packaged units.

They are cheaper, both in

capital cost and in labour costs.

Overhangs on windows can prevent direct radiation. Alterna-

tively heat-absorbing or heat-

reflecting glass can be installed. Roofs can also be treated reflectively, thus cutting or as long as it is within limits of eliminating their thermal gain.

One such treatment recently on the market is Dexader, a plastic membrane made by Liquid Plastics of Preston.

Ventilation can also be an effective solution in some instances, particularly in factories. However, in most offices it is impractical. The large amounts of air that have to be moved to obtain a cooling effect also create draughts and disturb paperwork.

The best overall solution is air conditioning. There are two main categories, component central station equipment and package direct units. The former is normally built into new blocks, and the swing away towards the latter in the last few years reflects the movement towards the modernisation market.

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In winter, when the air needs warming rather than cooling, it would be passed through a heater instead of a cooling coil. It would also be humidified if it was too dry, although there is some debate at the moment whether humidification is an essential part of air-conditioning equipment in this country, where relative humidity is rarely below 40 per cent and then only for short periods.

From the cooling coil the refrigerant in the pipes takes the heat extracted by the compressor and then passes it through a condenser which rejects the heat outside the system. In the sophisticated heat reclaim systems this waste heat is used in parts of the building where it may be required.

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INDUSTRIAL REFRIGERATION III

Fierce competition among hauliers

LONG DISTANCE transportation of fresh food and other perishables in an industry that has expanded enormously over the last 20 years. In 1960 the tonnage of refrigerated road meat, fresh fish, fruit and vegetables between Britain and the tables. Dairy products like butter and cheese, eggs, margarine, chocolate and confectionery are other foods that are transported.

The industry estimates that total import/export traffic by road alone represented a tonnage market of about 550m.

rowth in shipping has also been substantial.

There are all the obvious signs of a new industry enjoying strong underlying growth. A new trade association, called the International Refrigerated Transport Association, was formed last year, comprising most of the bigger hauliers.

Competition is fierce and operation below costs in the slack months of the year not unknown. New legislation, deriving from Europe, is due to be implemented for international carriage, and British operators would be operating under a new Act in the beginning next year. The ATP Agreement, as it is called, which applies only to road transport, is to come into force internationally November last year and has a range of implications for the industry.

An additional sign of a growing industry is the emergence in the month of a new magazine devoted to it. "Temperature Controlled Storage and Distribution," which is published every two months by Industrial News of Redhill, Surrey, claims to be the first journal to cover the field exclusively. Its circulation is international and it aims to cover technical developments, international marketing trends, new and modified products, com-

pany news and price movements. It suffered a check due to the onset of the world recession.

Dominated

The shipping container market to and from the U.K. is dominated by two groups, OCL, formed by four major shipping lines including P. and O. and Ocean Lines, and ACT, formed by Cunard, Blue Star and Ellerman.

The biggest is OCL, which started operations 12 years ago and now ships millions of tonnes of cargo, much of it refrigerated. It has about 11,000 refrigerated containers in total and its main routes are Europe to Australia and New Zealand and Europe to the Far East.

The road transport market grew very fast up to 1974 when assuming each trailer does three journeys a month, the total cargo research association in Food and other perishables.

are moved by road, rail, sea and air. British operators handle most of the export trade, in nearly 100 per cent of instances by road. They also control most of the market is discounted. The incoming traffic and industry French hauliers only arrive during the peak fruit season.

estimates put the U.K. market share at about 75 per cent, and the only significant competition comes from the Dutch. This

is not serious, however, as steel is directed at Europe.

There was a small decline in imports from the EEC in 1976, which means the U.K. operators have

were about 1.34m. tonnes compared with 1.5m. tonnes in 1975.

The main operators in the international market include: Comart Europe International, which has the most capacity and, as a subsidiary of Unilever, has access to its parent company's traffic. Only slightly smaller is Frigo Scandia, subsidiary of the Swedish company Malmo Rederi. It also operates cold stores and has connections in most European countries, giving it access to through transport of frozen meat exports.

Exports of poultry to the EEC were about 700 per cent higher, and pork exports were also up.

Total exports of beef were roughly the same, but there were significant increases to Germany and Benelux and decreases to France and Italy.

Butter and cheese exports more than doubled and frozen fruit exports went up by 152 per cent, the significant increase being in exports to West Germany.

Frozen vegetable exports were up 51 per cent with significant increases to Holland, Spain and West Germany, and chocolate exports were also higher.

The industry estimates that there are approximately 20 large or medium-sized operators controlling a total international

capacity of approximately 400,000 tonnes per year and whenever required by rail.

A further 50 per cent, years and controlled by smaller operators, certificates are at present being issued on a voluntary basis, on the basis of a total carrying capacity of 10,200 tonnes, or 600 trailers, behalf of the Department of Transport by the Shipowners Association.

Assuming each trailer does three journeys a month, the total cargo research association in Food and other perishables.

giving a total carrying capacity of the U.K. in Cambridge.

industry is 367,200 tonnes. There are two heat transfer coefficients: 0.7 watts per square metre per degree Centigrade and 0.4 watts. The lower specification would apply to the highest of the three classes of temperature laid down in the agreement.

The role of rail has diminished over the years. Very little U.K. export trade goes by rail, although this mode of transport accounts for substantial imports.

The shipping group OCL is a major user of the Freightliner service and most of their inland container movements are dealt with in this way.

However, major hauliers feel that rail is more expensive, slower and offers less temperature control than road. A typical load of peaches from Bologna in Italy could cost about £1,100 by rail compared with about £1,000 by road. The road time would be three days while rail would take at least four days. Finally road trailers are mechanically refrigerated—with the exception of liquid nitrogen alternatives—and many rail wagons are simply cooled with ice.

The operating company in Europe is Interfrigo, based in Basle, Switzerland, which is owned by the major European railway organisations.

Longer distance haulage, especially to the Middle East, is now developing. Interfrigo, the Derby-based subsidiary of the National Carbonising Company, has pioneered over the last 18 months transportation of perishables in an artificial atmosphere. The cost of converting trailers to ensure a hermetic seal is roughly £250 and a carefully calculated mixture of gases is injected to preserve the product. The first contract using the system—a shipment of meat from Le Havre to the West Indies which took ten days—was entirely successful.

David Freud

Packaged units gain ground

UP TO A few years ago to use users who appear to think very or five of these units could be equipment. Denco Refrigeration air conditioning as an often that they are being made required to day. In the meantime, recently provided the first d'ho solution to a special guinea pigs for trying out problem would hardly have been contemplated. It was virtually design engineers had tended, matter of course that anyone to expect more from packages than these could provide, designing the environmental than these could provide, design services for, say, a large company, the fact that no package fitting complex would produce can do more than the standard tailor-made job. Which is one cooling and heating coils it contains. Costs have, however, increased so sharply that designers have had to compromise and have cost so much.

Possibly computers are an extreme case, and it is a fact that many large installations in the U.S. have been the subject of extensive conversions—that and smaller office blocks have given significant boost to the package market, though many restaurants, especially in crowded city centres, will probably wait for a repeat of last summer before they equip themselves properly.

Suppliers of packaged units also attribute their current comparative success to the growth in the size of buildings being put up, so that where a 175 kW package would have met requirements in most new constructions a few years ago, four

Flexibility

Flexibility has improved greatly and units will operate effectively at as little as 10 per cent of design load. Meanwhile in several European countries it has proved possible to operate variable air volume terminals.

In the meantime, manufacturers of the heavier duty units, in particular, are having to pay much closer attention to energy conservation than they would have done before the oil crisis. Eaton-Williams, for instance is claiming some startling operating cost reductions for its new computer room air conditioners, going down in some cases by as much as 50 per cent below the running charges for conventional designs.

Recovery

This is achieved by using an electronic program selector controller, which will operate the equipment to match demand with minimal power consumption at all times. No ballast heater is needed and frequent starting and stopping of the compressor is avoided.

Novel heat recovery techniques are also a characteristic of a plant designed for the Bisham Abbey national sports centre, which has a fully air-conditioned indoor training facility 73 x 37 metres and 9.5 metres high, and with its other sports facilities is probably the largest centre of its type in the world. Built around two York/Borg-Warner packages of 115 tons refrigerator power each by Robert Somerville Associates, this plant is expected to have running costs some 60 per cent lower than a conventional system without heat recovery.

Low temperature hot water is produced by extracting heat from the ethylene glycol used as the cooling medium. Extract air is vented to give 1.25 changes an hour and keeps heat gains down to a reasonable level.

Ted Schoeters

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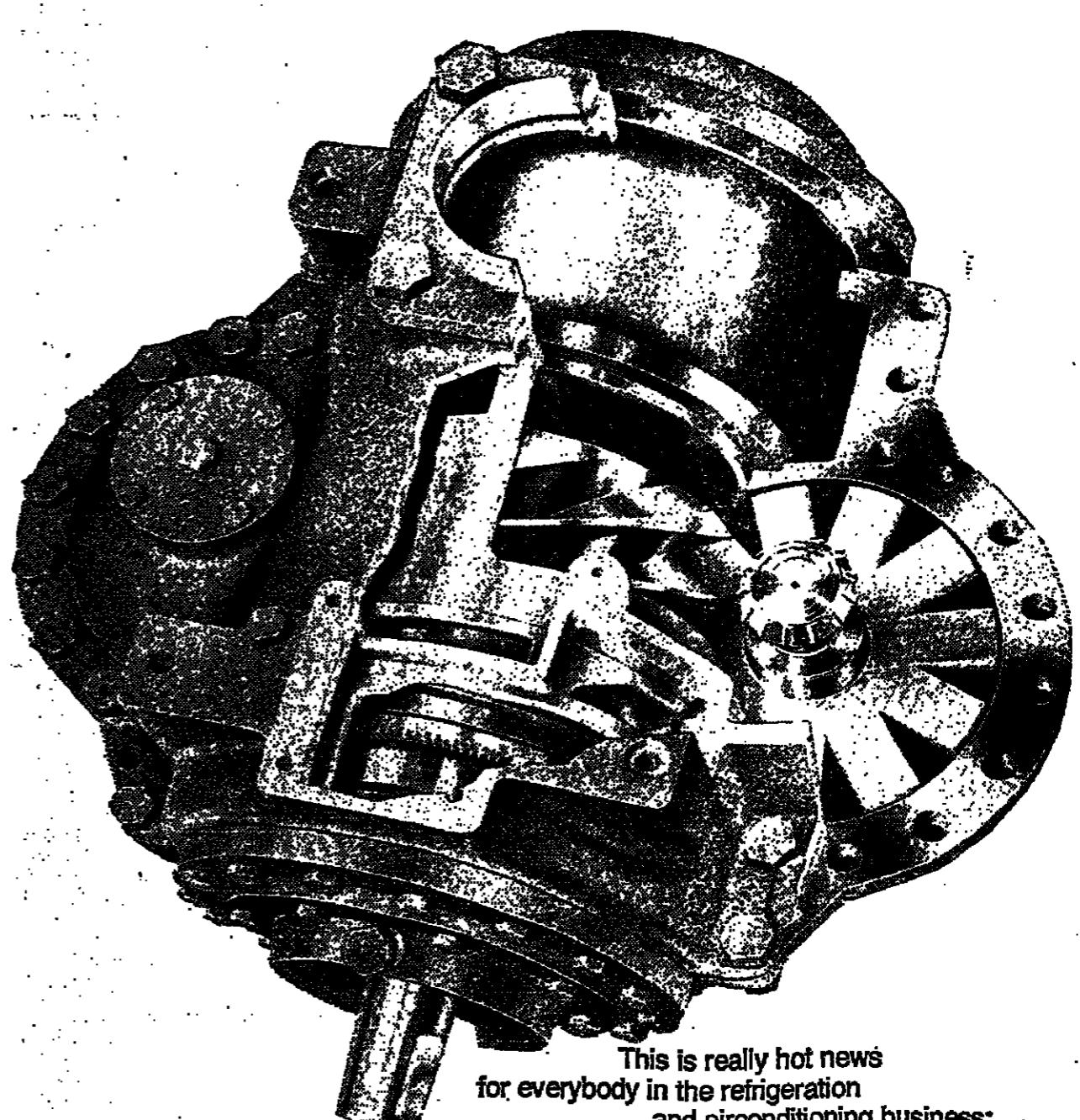
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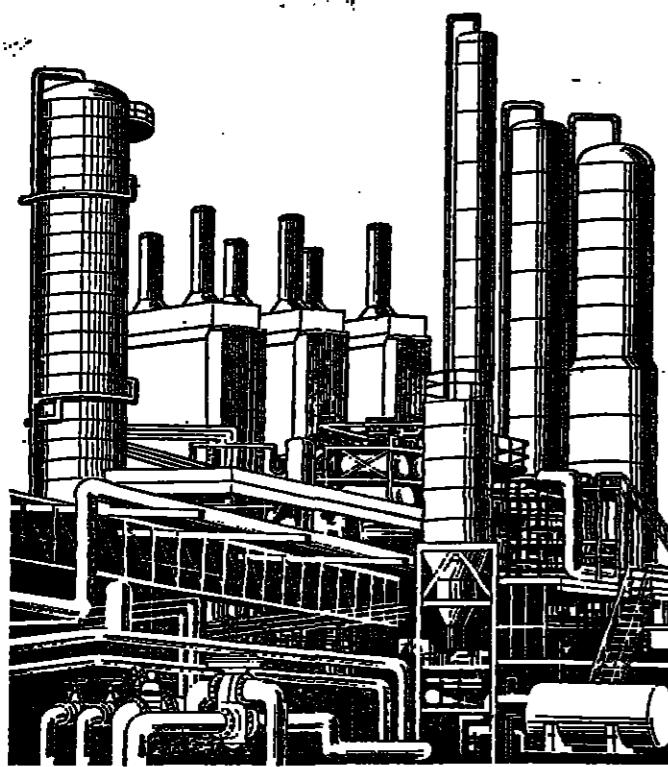
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Technology looks to gas

DURING THE next ten years reactors or by the advanced electrolytic method of decomposing water vapour at high temperature invented at Grenoble research centre and under investigation by General Electric (USA). Others assert liquid hydrogen.

Faced with serious problems resulting from the vast rise in the cost of conventional fuels, authorities such as the DGRST in France, ERDA in the U.S. and the Federal Science Ministry in Germany have designated groups in a number of centres to undertake a projected study of the most economical means of producing this potential fuel gas, as well as of methods of transporting and storing it.

Although some of the problems still appear formidable, the potential usefulness of the gas is enormous, not only as an adjunct for dwindling supplies of natural and synthetic gases but also as a raw material in a host of important chemical processes. The petroleum and petrochemical industries around the world already consume better than 200 bn. cubic metres a year in cracking and synthesis operations. But it may become necessary to step up this output many times if coal chemistry experiences the resurgence that appears likely as stocks of hydrocarbons continue to shrink and become more expensive. And apart from this application, there are many more in metallurgy—fluidised bed ore treatment in Venezuela, blast furnace studies elsewhere.

There are no serious problems in its distribution or storage. Hydrogen pipelines have been in existence for some years in the Ruhr, the Houston areas of Texas and in Siberia, some of them measuring as much as 30 cm. in diameter. Until recently, town gas contained up to 50 per cent. hydrogen. But there is no doubt that to move towards massive production of this gas on a national basis would bring about new requirements for compressor equipment and cryogenic units for the production of liquid gas on an unprecedented scale.

Some authorities believe hydrogen production to be wasteful of the primary energy consumed in its manufacture, even by direct reduction of methane in high-temperature

for pumps and compressors commonly demanded materials such as grey irons, aluminium bronze and stainless steels. Casting fumes are sharply reduced in this attractive manufacturing method which has great potential.

Not so far down the cryogenic scale, liquid nitrogen, extensively used in food treatment, is finding new applications which could spell use in high volumes. It has already been applied in extreme cases where serious problems have been encountered in building and civil engineering with unstable sub-soils discovered only after heavy loads have begun to build up on them.

Recently, two developments in metallurgy have pointed the way to wide-scale use of this gas, the most surprising being the use of liquid nitrogen (at minus 196 degrees) to freeze sand moulds for the casting industry. A process under development at W. H. Booth in Rotherham offers a worthwhile economy in materials and energy and can be used with

problems on high volume high pressure pipelines and effect. Britain appears to have rejected repairs without the need to the technology, very serious consideration is being given to reduced in this attractive manufacturing method which has great potential.

Even higher is the possible demand for the gas following the discovery that immersion in liquid nitrogen under certain conditions does not embrittle steel as might be expected, but imparts great toughness to the extent that working lives of treated components have been extended by between 50 and 500 per cent.

Leeds University metallurgists are seeking to discover why steel thus treated should be so much improved and why the new properties apply throughout the mass of the component which does not lose them on re-grinding. BOC International, which originated the process under the name Cryotough is seeking patent protection. It obviously has very wide applications.

A new method of dealing with

Developments in insulation

BRITAIN'S THERMAL insulation industry is about to enter a period of unprecedented change which may leave some companies in the industry out in the cold.

As the winter progresses, companies which have failed to take account of changes in Government and public attitudes to energy conservation may find their markets stolen by other more enterprising organisations with more appropriate products.

These changes have yet to crystallise. But within 12 months Britain may be the only country in Western Europe with mandatory standards of thermal insulation for all types of buildings.

Consultation proposals and replies from industry which could lead to these mandatory standards are now being considered by the Building Regulations Advisory Council. By Christmas 1977 the council will report to the Secretary of State for the Environment whose Department issued revised proposals to industry in July 1977.

The earlier proposals issued in April 1976 set out the Department of the Environment's suggestions for building regulations which would impose thermal insulation requirements on various types of buildings other than dwellings.

The idea was to explain how, in the Department's opinion, thermal insulation requirements might be extended to a wider range of buildings under the powers of Part III of the Health and Safety at Work etc. Act 1974. This would have enabled building regulations to be made for the conservation of fuel and power.

But officials recognised that while building regulations made in the interests of health and safety were concerned with the minimum standards necessary to achieve this purpose, the distinction between minimum and desirable standards was not so clear when energy conservation was the objective.

Significantly the Department recognised that changes in regulations may have an effect on many related aspects of the building industry. These would probably include the design, construction and use of buildings, the availability of the necessary labour, the supply of building and insulating materials, and the existing workload of local authorities, since these would be called to enforce the regulations.

As is now clear, the consultation proposals which resulted from this early discussion paper are likely to significantly alter the structure and nature of Britain's thermal insulating materials industry.

The Department's objective was to make amendments to Part F (Thermal Insulation) of the Building Regulations 1976. Many of the comments received from local authorities, industry and other interested organisations agreed that Part F should be extended. According to officials, it was generally agreed that no building type should be excluded.

There was less agreement to a rigid former, provides a among these organisations about highly reflective surface for the standards of insulation radiant energy. In houses it is likely to be useful, acceptable often used behind central heating and workable with existing radiators.

Cavity fillings are available. But the majority, said the through specialised contractors. Materials now used include urea formaldehyde, blown-in mineral suggested by the original discussion document issued in granules or granules of polyurethane. The granular approach April 1976.

Many commentators on the is the latest to be tried success-

proposals also thought that fully for house and factory standards should be established insulation.

When the new higher standards of thermal insulation come into effect, there are likely to be changes in the way these materials are used.

The Structural Insulation Association represents some 20 companies making all these products.

Reginald Aston, the chairman of the Association, has no illusions that the onset of the new regulations will leave the industry untouched.

There will be major increases in demand for thermal insulation materials, although Mr. Aston believes there will be no shortage of raw materials. The industry is able to move to double shift working and can further increase capacity, provided demand gives the companies an adequate return on capital.

The Association sees the new regulations as the start of a "new era" in thermal insulation in Britain. Changes will be in the use of certain materials. Concrete blocks, now used widely as a structural and partial thermal insulant, may have to be relegated solely to a structural role in view of their poor thermal insulation properties. Alternatively they may be combined with other insulants.

Falling sales of concrete for insulation would have repercussions for the manufacturers, who may be left with some spare capacity.

The other side of a downturn in aerated concrete demand would, of course, be an upsurge in demand for other, more effective thermal insulants. At the moment 40 to 50 per cent. of concrete blocks go into homes, the balance into industrial and commercial buildings.

Assuming the Building Regulations, Part F (Thermal Insulation) are amended as proposed by the Department of the Environment, there is no doubt that Britain's factories, offices, and other industrial and commercial buildings will have standards of thermal insulation at least as high as those in continental Europe.

As an energy conservation exercise this may be admirable, but it also means that Britain's houses will then have insulation standards lower than those regulating British factories.

A public realisation of this fact will undoubtedly lead to yet more changes in the Building Regulations, and more business for the thermal insulation material manufacturers.

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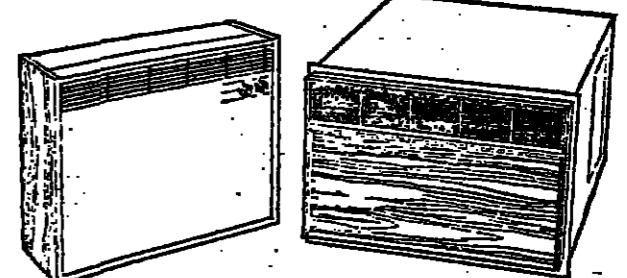
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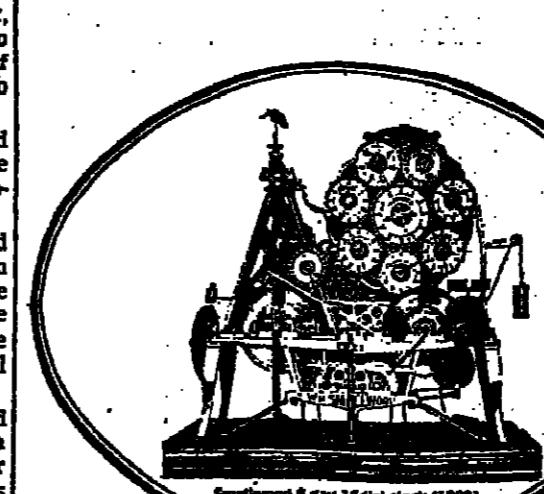
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John McTigue

GERMANY AND THE TERRORISTS

BY JONATHAN CARR IN BONN

The problems after Schmidt's triumph

THE HARD core of the Baader-Meinhof terrorist group is dead—with all that is known of the character of the three especially of Baader and his so-called "revolutionary bride" Ensslin. Even though the fate of the kidnapped industrialist, Dr. Hanns-Martin Schleyer, remains who fiercely rejected his middle unclear, the terrorist movement class origins and infected others in the Federal Republic of with his destructive zeal. Germany has been dealt a sharp blow. Is it fatal? Could the daughter seeking the collapse of movement have gained new society with a visionary fervour martyrs and be spurred to still smacking of fire and brimstone, more devotional sophistication?

The questions are being asked together, including the lone in Germany even amid the suicide in Stammheim last year euphoria over the successful of Ulrike Meinhof and their German commando operation in ten days this April of life in Somalia—itself followed quickly prison for murder and by the suicide of three attempted murder. What more terrorists yesterday in Stuttgart natural than that they should Stammheim jail. Andreas Baader, 34, and Jan Carl Raspe, 33, shot themselves. Gudrun Ensslin, 37, hanged herself. How did the first two obtain their weapons? And how did any of them know the commando raid had succeeded, thus robbing them of the hope that the Bonn Government would be blackmailed into letting them to freedom? After all, these and other jailed terrorists are supposed to be wholly cut off from the world under the special law passed through Parliament earlier this month.

At present there are no clear answers. In the moment of their death as in life the terrorists have shown an ability to co-ordinate and act with a truly revealed of their mentality nihilistic fervour which repels most people as surely as it attracts a warped minority. The German authorities have moved swiftly to counter any suggestion that the deaths may not be suicide. An international team of doctors is to be invited to examine the bodies and a representative of Amnesty International will also be asked to investigate.

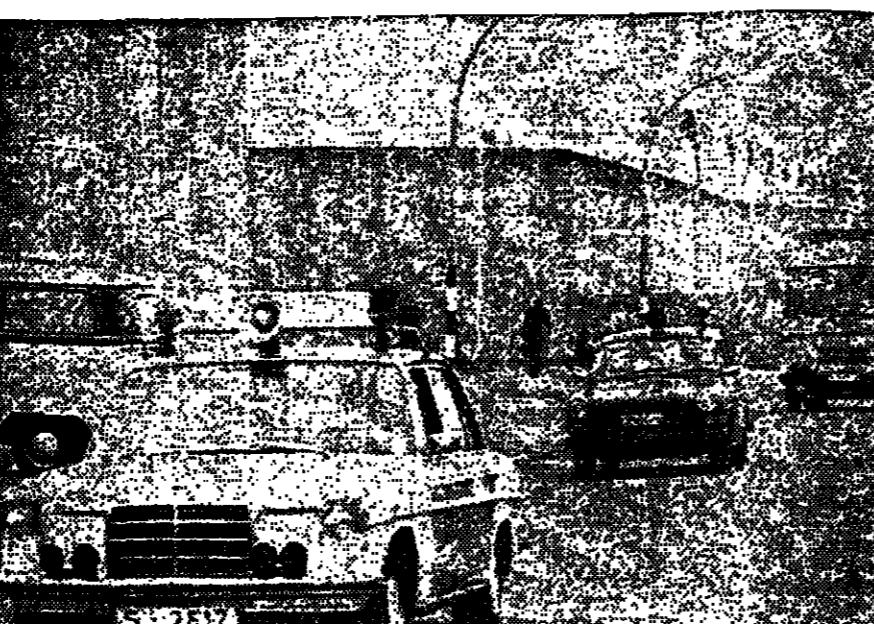
But in truth suicide coincides with all that is known of the character of the three especially of Baader and his so-called "revolutionary bride" Ensslin. Even though the fate of the kidnapped industrialist, Dr. Hanns-Martin Schleyer, remains who fiercely rejected his middle unclear, the terrorist movement class origins and infected others in the Federal Republic of with his destructive zeal. Germany has been dealt a sharp blow. Is it fatal? Could the daughter seeking the collapse of movement have gained new society with a visionary fervour martyrs and be spurred to still smacking of fire and brimstone, more devotional sophistication?

Peace

Attention has often focused on the Baader-Meinhof group, as though the jailing or death of those immediately associated with the band might bring peace to a sorely-tried German society.

But beyond the handful remaining alive in German prisons, an indeterminate number of terrorists is still at large. A year or so ago authorities claimed there were a few hundred in that hard core. A few months earlier this month.

There are those responsible for the murder of the Federal Attorney General Herr Siegfried Buback, and the banker Herr Jürgen Ponto earlier this year. There are those holding Dr. Georg Sieber, former chief psychologist of the Munich police department and widely regarded as one of the most expert observers of the German hijacking, clearly working in close co-operation with Arab extremists. One revolutionary captured many and moved relatively openly.



Police cars (left) escort the ambulance carrying Jan Carl Raspe and Ingrid Moeller to hospital in Stuttgart yesterday morning after they had tried to commit suicide in jail. Raspe died later in hospital. The man who led the attack on the hijacked airliner in Mogadishu, Ulrich Wegener of the Federal Border Police, is pictured right.



between gaolers, terrorists and others are strongly advocated by those outside to be blocked. The opposition parties. They are there doubt that the Government's reservations raised against the Bill are of substance. The hand there should be official monitoring of "rebel" deputies having conversations between their parties to try to ensure they will fall into line next time. Constant emphasis is being placed on the "solidarity of democrats" against enemies of the law.

The danger is clear—and the Federal President Walter Scheel has drawn attention to it in several recent and courageous speeches. He warned against saying or doing anything that would divide Federal Germany into two hostile camps, each failing to comprehend or even to listen to the other.

Something like that has begun to do so.

Dr. Schleyer not be returned alive or another terrorist outrage occur.

Many Germans are sick and tired of foreign doubts about them, foreign envy—and what often looks suspiciously like foreign hatred. They have had not only, in the opposition parties who feel that the time has come for strong action after an excessively liberal attitude in past years. At most extreme this turns into an indiscriminate attack on left and liberal intellectuals as "sympathizers" of terrorism. There are intellectuals and a minority of deputies who feel unfairly attacked. They are on an illiberal road, which will seem to be unique in Europe if not the world. But after that is said the reaction of Parliament must still give cause for unease to Germany's friends.

Even before the hijacking, a series of new anti-terrorism measures has been under discussion in all parties and a vote in Parliament shortly. Some are relatively straightforward, such as a legal requirement for identity checks to be made at search for final answers rather than in action to mediate and others, such as a proposal for a unified police law throughout the Federal Republic, now seems most to need a constitutional change. Still no new lawmaking.

Letters to the Editor

London as a market

From Mr. J. Cowper.

Sir—I read (October 15) that Mr. Hattersley is to refer the merger of Smith Bros. and Bisgood Bishop to the Monopolies Commission to assess whether the merger would increase the efficiency of the securities market with benefit to investors. Up to date Mr. Hattersley and his Government have shown considerable concern to the investing public and benefited them by a 2 per cent stamp duty, a rule requiring them to surrender 25 per cent of their foreign currency profits and limited their dividends. One would think the investing public are sadistic and cannot wait for another whipping.

There is no monopoly in this merger. Mr. Hattersley overlooks the fact that there are two jobbing firms in Glasgow, two in Manchester, one in Liverpool, one in Bristol and three in Birmingham and any broking firm anywhere in the UK can deal with them. But few do, and why not? Simply because they have not got the capital base to take on the size of deals the institutions require. When Smith Bros. and Bisgood get together to provide a jobbing firm with a capital base large enough to be able to make a market to institutions, and just as important, to international dealers and hence to the investing public, they are told "this is too enterprising, we had better look in to it."

If London is to attract the foreign earnings of international dealers—and most of this business is now by-passing the London market, hence the Stock Exchange chairman's recently set up committee to investigate this malady—then Mr. Hattersley will surely agree that enterprise such as Smith Bisgood must be encouraged, rather than the benefits with which his Government has so far devised to restrict the investing public, and the city.

J. D. L. Cowper,
73, Cheapside, E.C.2.

Selection at random

From Mr. D. Roper.

Sir.—The subject of "Ernie" is fascinating and an ever recurring topic. I merely add that prefix letters allotted? A man buys 2,000 bonds series "ABC" 1-2000; his wife at the same time and place buys five—"ABC" 2001-5? Or does she get a different prefix? Is the allocation indiscriminate or governed by a code of procedure?

If the latter then I advance the theory that Ernie's selection is not random but "selective" random selection. I would like to know that I am wrong!

D. H. Roper,
Heath End, The Common,
Chipperfield, Herts.

Premium bonds

From Mr. N. Wilson.

Sir.—Correspondence in your columns and telephone calls and letters to me following my letter of September 21 indicate that several of the people concerned may well be unlucky because their investments are small: £100 of eligible bonds invested for one year have only 105 average chances in 1,000 of winning a prize and even if held for five years only 42 in 1,000. Of course, these calculated chances abroad your article may have its capital stock. Also, where Whitechurch, Herts.

need to be substantiated by Bond Office statistics and at best they can only be averages—some bondholders will be luckier, others less lucky.

Approaching small bondholders and prizes from another angle: if the average annual yield is 4 per cent then bondholders with £100 invested could only expect on average to win a £25 prize once in six or seven years.

A caller was upset because his investment yielded only 1 or 2 per cent annually as against my assumed (mark the word) average of 3-4 per cent. On the other hand a correspondent's investment yielded him 7.8 per cent annually—about double the average—for 18 months. Annual yields plotted against the number of times they occur should at the usual rising distribution curve. Mr. Hardwick's yield (September 29) would be near the ridge crest and the yields of my caller and correspondent on either flank. Another caller doubted whether large prizes of £5,000 and more are in fact handed out to bondholders but I could assure him that I did know at least one winner of £5,000.

Apart from our prizeless 14-month interval my wife and I are quite satisfied with our winnings but we still suspect that during that interval our eligible bonds may have been withdrawn from eligibility (see pp. 8, 9 and 11 of the Ernie booklet) and been restored to eligibility only on protest. External checks on the Bond Office and statistics about prize-less intervals would reassure us and other bondholders whose long prize-less intervals ended only on complaint.

Peter Milne,
27, Roderick Road, N.W.3.

Order out of disorder

From Professor Sir Nevill Mott, FRS.

Sir—I would like to thank Mr. David Fishlock for his article (October 15) on my Nobel prize, which gives an entertaining account of the work for which it was awarded. But I must add that the story in doubtful taste said to illustrate my sense of humour must have been made up by someone else, and should not be attributed to me.

Nevill Mott,
University of Cambridge,
Department of Physics,
Cavendish Laboratory,
Madingley Road, Cambridge.

Shedding labour

From Mr. I. Jones.

Sir.—In his letter (October 12), Mr. Tillwood describes how he ingeniously measures the way that large wage increases could put many companies at risk and cause up to 1.6m. unemployed. While supporting his theory that high wage settlements and unemployment are necessarily linked, I would like to suggest some complexities to his analysis.

By describing a company whose profit has been taken by a wage increase, as being at risk, he underplays the possibility of raising loans to keep the company in business. A company with a record of profit is hardly going to be pushed into the hands of the receiver because it starts to make a loss. Of course, if the company had a bad profit record, the argument is different, and I suspect that Mr. Tillwood would not object greatly to such a marginal company going out of business. Nor, in this case, should the unions be surprised if a large wage claim creates unemployment.

He suggests that the company "at risk" squeezed by unions will be deprived of retained earnings for modernisation and research and development. This is true, but exaggerated his case. He should not forget that in its depreciation the company generates funds for maintaining

Efficient milk marketing

From the Managing Director,
Fountain Farming.

Sir.—Once again your correspondent, John Cherrington, (Are Milk Quotas the Only Answer? October 14) trots out the glib solution put forward by established farmers to apparent market over-supply.

There is no doubt that there is a temporary oversupply problem within the EEC of milk products and it is quite clear that this is not only a social problem but must remain so quotas or no.

The two certain ways to ensure that inefficient milk production continues in the Common Market are either by imposing quotas or continuing with a high milk price. Currently the German farmer is receiving approximately 65p per gallon for his milk against the British farmers' 45p.

The imposition of quotas has always proved to be the best way to maintain the status quo and to encourage an ever-increasing level of inefficiency.

Statistics are indeed dangerous figures with which to play but, nevertheless, I believe it is true to say that if all herds of three cows or less were in some way disposed of within the Common Market, then there would, in fact, be a deficiency of milk products within the whole of the Common Market.

Let us encourage a rationalisation of the milk producers and try and encourage the mainland Europeans to market their milk in as efficient a manner as does our own Milk Marketing Board.

Anthony Rosen,
Chapmanford Farm,
Hasthurstone Priors,
Leicestershire.

To-day's Events

GENERAL
CBI leaders meet Mr. Denis Healey, Chancellor of the Exchequer, to urge caution in any inflationary measures. CBI Council meets afterwards.

Concorde makes first proving flight from Toulouse to Kennedy Airport, New York.

Dr. Shirley Sommerskill, a Minister of State, Home Office, and will consider decision made by yesterday's meeting of shop stewards on its proposed industrial relations package.

The Queen and Duke of Edinburgh begin two-day visit to the Bahamas.

Sir Adolfo Suarez, Spanish Minister, begins two-day visit to London.

Two-day opening meeting leader, addresses Conservative

COMPANY RESULTS
British Home Stores (half-year), Davy Day (full year), Dunlop-Gooder-Marx (half-year), Dunlop (half-year), Rugby Portland Cement (half-year).

COMPANY MEETINGS
Fisher (Albert), Blackpool, 11.30, Gresham House Estate, 24, October.

Concorde (first proving flight from Toulouse to Kennedy Airport, New York).

British Steel Institution annual meeting.

Lloyd's Register of Shipping casualty return for 1976.

Daily Express Motorfair opens, Piccadilly Hotel, W.1, at which lunch speaker is Mr. Reg Prentiss MP.

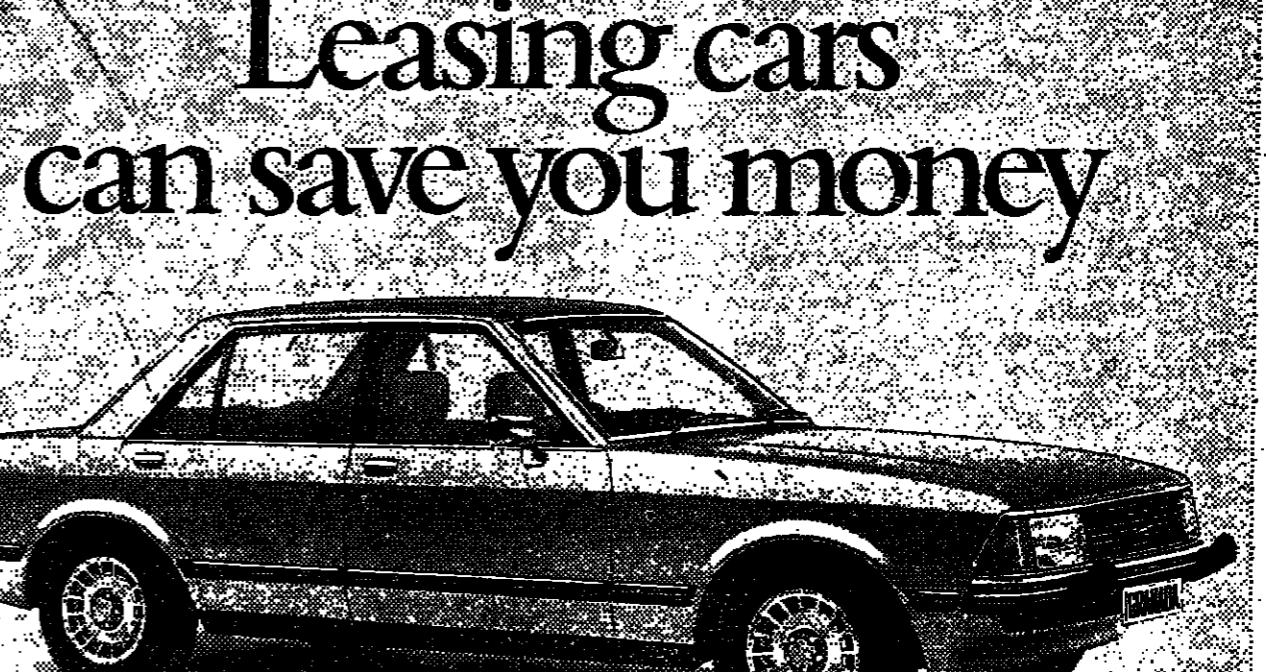
Annual service for seafarers, attended by Lord Mayor and Sheriff, St. Paul's Cathedral, 3.45 p.m.

Professor Oliver McGregor, chairman, Royal Commission on the Press, speaks on "A Free Press in a Free Society," Stationers' Hall, E.C.4, 6 p.m.

Mr. William Whitelaw, deputy leader, addresses Conservative

OFFICIAL STATISTICS
Basic rates of wages and normal weekly hours (September).

BALLET
Gala performance by Royal Ballet of "The Sleeping Beauty," Covent Garden, W.C.2, 8 p.m.



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John, 1977

COMPANY NEWS + COMMENT

Brooke Bond on target with £49.8m.

IN LINE with the forecast of profit not less than £48m, made with the April one-for-four rights issue, Brooke Bond Liebig reports a jump from £26.1m. to a taxable surplus of £49.8m. for the year to June 30, 1977, after making £0.8m. additional provisions for unrealised stocks at the year end.

External sales advanced 30 per cent. from £391.5m. to £769.2m. in 1977, trading profits rose from £21.4m. to £37.6m. of which £7m. was earned overseas. The directors say that higher values for tea and coffee were the principal reasons for this increase, while meat operations contributed to overseas results in the UK and South America.

Taxation took £19.59m. (£12.87m.), of which UK tax was limited to a provision for ACT not immediately recoverable because of continuing stock releases and capital expenditure allowances. Overseas tax increased from £10.5m. to £17.6m. because of the company's inability to offset losses in France and Italy.

Stated net earnings are up from £1.17p to 12.98p per 25p share. A dividend of 2,007.57p net on increased capital lifts the total to 2,763.82p (2,474p) equivalent to a 10 per cent. increase at the gross level.

See Lex

Capitol well down after three months

NET INCOME of Capitol Industries for the three months ended September 20, 1977, fell from US\$2.17m. to \$2.05m. or from 86 to 82 cents per share. Sales were static at \$51.09m. against \$51.02m.

Commenting on the results, Mr. Bhaskar Menon, president and chief executive officer, explained that higher recording and manufacturing expenses and increased provisions for obsolescence adversely impacted profits in the quarter compared to the same period last year.

The directors declared a quarterly cash dividend of 8 cents per share payable December 15, 1977, to shareholders of record November 15, 1977.

Sales of the company's Havana cigar brands continue to expand and the EP group is experiencing most satisfactory growth in all sectors. Subsidiary Autobooks, while trading satisfactorily in the

prospective p/e on average capital of 75 at 37p while the yield is 7.5 per cent.

Burrell ahead 20% so far

INDEX TO COMPANY HIGHLIGHTS					
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Baird (Wm.)	22	7	Mil Marsters	22	5
Boulton (Wm.)	22	5	Newman-Tonks	26	4
Brooke Bond	22	1	North (M. F.)	26	4
Burrell & Co.	22	4	Rediffusion TV	24	3
Capitol-EMI	22	1	Regional Props.	24	1
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Siemssen Hunter progress

FIRST HALF 1977 taxable profits of cigar importers, tobacco merchants and publishers Siemssen Hunter rose from £234,981 to £376,973 and the directors are confident that, barring unforeseen circumstances, the final result will be comfortably ahead of the £414,331 for 1976.

Associate company, Siemssen Thrashie and Company, contributed a profit of £58,956 this time, compared with a loss of £20,824. The directors add that despite continuing pressures on consumer spending, the group is well placed to expand its activities.

The net interim dividend per 10p share is increased to 1.368p (£1.0332p), on increased capital. The June one-for-five rights issue, this group's first, has halved the total dividend for 1977 forecast at the time of the rights, and the directors anticipate a maximum permitted final. Last year's final was 1.0733p.

Sales of the company's Havana cigar brands continue to expand and the EP group is experiencing most satisfactory growth in all sectors. Subsidiary Autobooks, while trading satisfactorily in the

U.K., has experienced a drop in exports during the restructuring of certain distributorship arrangements and has had to absorb heavy costs in setting up a subsidiary operation in the U.S., the directors explain.

• comment
Siemssen's trading profits rise of 30 per cent. are consistent with growth from both the tobacco importing business and its newer publishing side—the split is roughly 60:40. The associate company dealing in tobacco leaf, is a more volatile situation, as reflected in the £80,000 turnaround in interest paid—the group over-interest has risen to fund its subsidiary increase in storage. The group says that the stock increase is largely by design—buying in stocks ahead of possible price increases—and partly because growth has not met expectations. Proceeds from the June rights issue have also been used to buy the higher stock level. Volume sales have generally remained flat over the half year with no sign of any pick-up in demand from the publishing division, which accounts for about a quarter of sales. Elsewhere the EP publishing company has gone through the time reflecting a cut back in experienced some growth. Margins are likely to remain under pressure in an intensely competitive market and pre-tax profits for the year may be no more than £750,000 compared with £900,000 last year. A prospective p/e of 11 last year and a yield of 9.1 per cent. at adjusted 10.6p looks fair value.

The company is also proposing a one-for-five rights issue which will be distributed on June 29, with an interim dividend which is up from 2.945p to 3.75p. The company was given permission in April when it announced a one-for-five rights issue to increase annual dividends by 25 per cent., and directors intend to raise annual payout by this amount. Last year an adjusted 10.6p was paid.

Commenting on the first half, Mr. Dougherty says "Sales have been up from 1.55 to 2.25 in the last six months. East Africa is the major market and here Marshalls has been able to increase its car sales by 50 per cent. The reason is that despite quota controls the group was able to bring sales into the first half since it has set up a local plant which will start manufacturing pickups with 273 vehicles sold despite being restricted by import quota.

The motor accessory manufacturing and distribution arm M&C Components performed excellently and extensions financed by the rights issue is now operational and will facilitate expansion. BMAC continues to improve, while the Delta companies in East Africa continue to decline.

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Regional Props. Board heavily criticised

By JOHN BRENNAN, PROPERTY CORRESPONDENT

MR NEVILLE CONRAD, chairman of Regional Properties, in Kensington, is suing Watford Chemical Company, which opened yesterday's annual general meeting with a speech talk of for its more than £10m losses incurred by Mr Justice Templeman in the High Court on Monday. And Mr. A. C. Hudson, a director of the company, has been adjourned to the hearing of corruption charges which relate to this meeting, visibly ruffled by a flood of critical questions, and talking about shareholders' nominees attending the meeting to site purchase.

Interestingly, one shareholder to speak at the AGM was a Mr. George Dulin, a private investigator who is understood to have at one time worked for the vendor of the St. Stephen's site, Mr. Edward Pinelis.

Another intriguing critic of the Board was a representative of Vidas Nominees, which is believed to be a share holding vehicle of stockbrokers Vickers, Da Costa.

One other very vocal opponent, described by Mr. Conrad at the meeting as a "strange and anonymous character" was Mr. Michael Giddings, Mr. Giddings represented Mrs. Angela Danzig, daughter of Regional's founder and sister of current chairman Mr. Peter King.

A call to reject the accounts by Vidas Nominees—taken as a "personal affront" by the Board—failed, and the meeting proceeded to a hesitant close. In true AGM tradition one lone voice then expressed his pleasure that this "curious meeting" was over.

On the question of valuations, Mr. Conrad explained that only one development site is retained in the books at a directors' valuation. This is an Ealing development site currently producing £5,000 a year in rent on which there are no planning consents. The property is, however, held in the books at £1.5m.

Mr. Conrad said a cloak of sub judice around the critical legal battle now waging around the St.

The petitions were adjourned for 21 days for re-service.

Rediffusion TV lift to £11.6m.

ON TURNOVER £12.36m, higher by £30.84m, Rediffusion Television boosted taxable profit from £2.95m to £11.6m in the July 29, 1977 year.

Attributable profit of the company, £2.5m per cent owned by British Electric Traction Company and the remainder by Rediffusion Limited, was £2.05m and all will be distributed to the parents as dividends, totalling £9,340 per £1 share against £7,542 per £1 share last time.

EDITH PAYS 3p INTERIM

Pre-tax revenue of £1.1m, Estate Duties Investment Trust for the half year to September 30, 1977, rose slightly from £1.06m to £1.1m. On increased capital from a company loan taken in June the interim dividend is stepped up to 3p net per £1 share compared with an equivalent 2.825p. Last year's final was an equivalent 2.825p.

PETITIONS Compulsory winding-up orders lent 4,406.25p.

Fairview turns in £2.12m.

ON TURNOVER of £18.77m, Fairview Estates recorded a pre-tax profit of £2.12m, in the year to June 30, 1977.

A final dividend of 3.38p net lifts the net total to 5.645p on earnings of 19.4p per 10p share. For the previous six months a dividend of 2.528p was paid.

No sales of industrial property or building land took place during the year, says Mr. D. J. Cope, chairman.

Net assets at June 30, 1977 were up from 1.1p to 8.5p per share and the improvement stems from retained earnings of the year and treatment of deferred tax which follows the principle incorporated in the latest exposure draft of the Accounting Standards Committee (ED.18). The investment properties held by the company are, in the main, included at cost. No re-evaluation of any property has taken place since 1972. Therefore, a "substantial" underlying asset is not reflected in the balance sheet.

The contracted rent roll on investment properties is now £1.2m, in an increase of over 40 per cent in the last 18 months.

The company's first rent reviews occur during the next year upon a number of industrial properties and rent increases are assured. Previous rent roll growth has all been derived from new lettings. Rent reviews will henceforth be a major factor, says Mr. Cope.

House sales are proceeding at a satisfactory rate in line with the company's development programme and the chairman reports a modest improvement in margins and a more promising outlook.

• COMMENT

Latest results from Fairview show just how much the industrial and commercial property portfolio is underpinning performance—at a cost of 1.2m per £1 share compared with an equivalent 2.825p. Last year's final was an equivalent 2.825p.

Local authorities and finance houses seven days' notice, others seven days' notice.

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Zetters off to good start

In his annual statement Mr. Empire Pools which have also should be possible towards the end of the current year. The acquisitions have put considerable strain on the group's pool organisation but the directors started well "and we are all optimistic."

As reported on September 22, pre-tax profits rose from £530,000 to £594,726 for the year to March 31, 1977, on turnover of £5.45m. With the benefit of more than two months of operational experience, this view has been confirmed.

Mr. Zetter reports that the year started well "and we are all optimistic."

The successful conclusion of the acquisition of Copes Pools and the start of negotiations for the acquisition of operation is achieved and this respectively.

The football pool side can be up to £1.0m (£1.000 per £1.000 and £300,000 (£12,000 trading profits while the cinema is contracted to be very low and a wet and

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INTERNATIONAL FINANCIAL AND COMPANY NEWS

Jardine profit moving up

BY DANIEL NELSON

SPITE A DISAPPOINTING those of the previous year, and Jardine Davies missed its third quarterly dividend and said it all of the low world sugar world would not be able to meet its dividend forecast for the full year.

An interim dividend equivalent of HK\$0.19 per stock unit was declared in scrip from with a cash option. The full dividend is expected to be the equivalent of HK\$0.47 per unit, making a total of HK\$0.66 for 1977 and HK\$0.63 for 1976. This continues a trend between 1965-76 in which earnings per share and dividends increased every year: the former from 11 cents to HK\$0.63, the latter from 4 cents to 6 cents.

Economic conditions in southern Africa had, made life substantially lower than difficult for Rennies Consolidated

Holdings but the company was well placed to take advantage of any improvement in conditions.

In Britain there had been a further major development in insurance broking activities with the acquisition of brokers Thompson, Graham.

On the company's investment subsidiary in the Middle East Trading, Transport and Trading (UK) Newbigging said that a further S\$100 million had been made in its acquisition of the 25 per cent owned by Reed International, as consideration for its printing and packaging interests considered complementary to Reedpak's activities.

The circular to shareholders

reveals that these assets are

being sold to Reedpak at close to net asset value and on terms reflected after tax earnings. The earnings are 50 per cent higher than those actually achieved in 1976 and 4.5 times 1975 profits, which suffered badly from the rise in raw material costs in the wake of the oil crisis.

Reedpak has the cash facility to accommodate this deal which will go along way to simplifying Reed's interests in South Africa. These acquisitions will add 5.7 cents a share to Reedpak's earnings which were expected to be about 60 cents a share this year.

Reedpak's share price is currently 220 cents, or about five times earnings.

Reedpak's other interests in building products, paper

merchandise and chemicals, which are not directly complementary to Reedpak's activities, will be kept separate.

In addition Reed International retains 50 per cent interest in Stanger Sugar and Paper, a joint venture with the CG

Smith sugar group. Reed's

exposure to this new venture, which will incur substantial losses in its first year of operation, was R27m. at last count.

Although mainly a property company, the company also has interests in hotel management, manufacture and distribution of paper products. In particular, this year it agreed to buy a 22,000 square feet site from Amy Canning for HK\$200m. The land is being released over a three-year period in stages.

Hang Lung and Hopewell Holdings are partnering the mass transit corporation in developing

the corporation's Kowloon Bay

site which involves the construction of 5,000 flats as well as a

commercial and shopping complex on podium above the rail-

way's main depot.

The proceeds are earmarked for the Brazilian-German nuclear programme, under which West Germany is providing Brazil with two nuclear power stations.

Spanish borrowers are still active on the market. Seat, the car company, is the third

owned by the Government, although many consider its credit

rating to be the best.

Lead manager is Chase Manhattan Ltd. and managers include Banco do Brasil, Compagnie Luxembourgeoise de la Dresdner Bank and Morgan Guaranty.

Other managers represent a strong cross section of banks.

Another credit for Brazil

would seem to bear out the forecast that spreads are falling.

Empresas Nucleares Brasileiras is raising \$30m. for five years with a spread of 14 per cent over Libor.

This loan carries a State guarantee (which is worth 1 per cent over Libor less than a non-State guaranteed credit).

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INTERNATIONAL FINANCIAL AND COMPANY NEWS

AMERICAN COMPANIES

Fresh offer for CCLA

BY STEWART FLEMING

THE TAKEOVER battle for Coca-Cola Bottling Company of Los Angeles has taken a new turn with an announcement from Northwest Industries that it intends to make a \$200m. tender offer.

CCLA is already in receipt of a \$140m. bid from MCA whose film subsidiary Universal was responsible for such box office hits as "Jaws" and "The Sting" and whose television studios make the *Kojak* series.

Northwest Industries is a

bidder for CCLA and the offer to shareholders.

NEW YORK, Oct. 18.

CCLA is one of hundreds of widely diversified conglomerates in the U.S. which with interests in chemicals, steel, coke bottlers who act with the giant Coca-Cola Company of and consumer goods such as Atlanta, Georgia, which, for a clothes. It also distributes supplies, bottlers with coke, "Catty Sark" Scotch whisky, syrup and the rights to the trademark. The bottlers are not confined to one line of business and MCA bid but has quickly such as Canada Dry and Dr. Pepper.

Northwest Industries is a

bidder for CCLA and the offer to shareholders.

CCLA's sales last year were \$165m. and its earnings were \$11.42 a share. From \$13m. or \$3.82 a share, although sales rose to \$1.42 a share, the same period last year, with sales increasing to \$17.7m. from \$16m. Foreign exchange losses in the period \$55m. from \$49m. agencies were 18c. compared with 35c. as reported from New York.

A substantial part of the improvement in earnings, however, resulted from reduction in foreign exchange losses.

THE RISE in income at Honeywell Inc. in the second quarter of this year, while it described results to date in October as "unsatisfactory".

While third quarter earnings were above last year's, they were below this year's second quarter.

The unsatisfactory development appeared to reflect the continued broad-based uncertainty which pervaded the domestic and world economies, according to Celanese.

The company said that it was too early to determine whether this was merely a temporary current-month problem, or whether it represented a trend which might persist until the uncertainties were resolved.

For the first nine months of the year net profits were 8.3 per

cent down on the same period in 1976.

Operating income for the third quarter was \$1.6m. a share, against \$1.73 for the comparable period. Sales, however, moved up from \$638.5m. in the year ago period to \$711.6m.

For the nine months to date, operating income stands at \$87.8m. (\$852.8m.) on sales of \$87.8m. (\$852.8m.) on sales of

\$2.08bn. (\$1.75bn.) and share income at \$4.17 (\$3.2).

Income rises at Chase

CHASE MANHATTAN Corporation, which to-day reported a 32 per cent gain in net income to \$1.5m. from \$23.9m. a year ago, attributed the gain to an increase in overseas net interest income due to higher loan volume, reports Reuter. Domestic interest income declined due to somewhat lower volume.

The non-interest factors, Chase

said, were an increase in non-interest income and a further decrease in the loan loss reserve, which has declined in the past seven quarters.

Operating share income for the third quarter was 91 cents, against 69 cents in the comparable period. For the first nine months of the year, net income of \$87.1m. compares with \$79.4m. previously and share income of \$2.65 with \$2.48. Loan loss reserve stood at \$340.4m. on September 30, against \$315.6m.

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Operating share income for the third quarter dipped to \$1.6m. a share, against \$1.73 for the comparable period. Sales, however, moved up from \$638.5m. in the year ago period to \$711.6m.

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A new market for food machinery

By ZBYNEK ZEMAN and KELSEY VAN MUSSCHENBROEK

THE EEC and Comecon aside for the moment, exports of food products, know-how and technology frequently pose immediate problems of payment. Comecon countries tend to insist on various forms of barter or "buy-back" deals, while Western companies increasingly resist these pressures in the knowledge that products offered in return are likely to be very difficult to sell in Western markets. Longer-term, however, the very technology transfers which are now taking place will certainly improve the quality and sophistication of Comecon food products. They will then become more saleable in Western markets. What ensures to do so is all the because Eastern Europe, the USSR, is suffering a acute shortage of industrial, which can only be met by releasing man- from agriculture. And which employs a greater proportion of the working than is usual in the must become more capital

ve. Econ planners themselves see that without Western technology these objectives will be difficult to achieve. However, of Western technology does in recent years have Comecon's indebtedness West to levels which now difficult to contemplate that debt any

at this point that Comecon face to face with the issue in food and agriculture. Historically (say, pre-Cold Eastern Europe was a and natural exporter of its to Western Europe, to-day there is a tendency to look to the sector to reinforce any ex- tive. However, the food policy from West to East the 1971-75 planning did less for food and culture than for other industries. Some sectors of Comecon's processing cannot compete with sophisticated Western products which a growing degree of value-added. Other sectors Comecon does not export capability, for e. meat, sugar, wine, products and preserves, however, it frequently to EEC import restrictions, a few of which are result of the Common's own surpluses. ed from Brussels, trade between Comecon countries in food agriculture presents a of problems. In the term, and leaving grain

tonnes in 1977-78—implying a Romania and the USSR will be able to spend the forecast upper limits of their capital fund allocations to the food industry. Again roughly one-half of the total sum will be accounted for by the Soviet Union.

Past figures and some of the achieved by better utilisation of total capital expenditure in grain for livestock feeding or Comecon, up to 40 per cent, goes shifting human consumption to the purchase of plant

away from grain towards meat and equipment. Taking this as a rule-of-thumb for the food

feed, or imported from processing sector, expenditure

on machinery over 1971-75 can be estimated at \$10bn-\$14bn.

and that planned for 1976-80

is \$16bn-\$18bn.

That in turn would have important implications for "processed" food markets such as bread and other bakery products, dairy products and baby foods, all of which are among sectors now receiving increased investment not only in the USSR but in most other Eastern bloc countries. In the five-year period 1971-75, capital expenditure in the Comecon food industry (excluding Yugoslavia) totalled an estimated \$35bn. (converting on the basis of official exchange rates) of which roughly half was accounted for by the Soviet Union.

Plans for 1976-80 investment indicate a total sum of \$47bn. of food processing and packaging, depending on whether

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WALL STREET + OVERSEAS MARKETS + FOREIGN EXCHANGES

Rally on bargain hunting falters

BY OUR WALL STREET CORRESPONDENT

AN INITIAL rally fuelled by for a new rise soon in the Prime bargain hunting on Wall Street. Rate. Alcan Laboratories were heavily traded again, but closed unchanged at \$38.11, after yesterday's gain of \$3.00 on the bid proposal from Switzerland's Nestle SA.

The Dow Jones Industrial Average was only 0.17 harder on balance at \$80.51, after having touched \$82.34 earlier in the session. The NYSE All Common Index ended unchanged on the day at \$51.19, after \$51.37, while gains held the edge over losses by 687 to 620. Trading volume expanded by 2.79m. shares to 20.13m., compared with yesterday.

TUESDAY'S ACTIVE STOCKS

Stocks closing above/below yesterday's day.

Alcan Laboratories ... 479.400 +1.400

Dr. Pepper ... 477.000 +1.000

Vermont ... 378.500 +2.500

Citgo ... 216.500 +1.500

Coca-Cola Bottling ... 200.500 +2.500

Sambo's Restaurants ... 189.100 +2.500

Mitsi Laboratories ... 181.100 +1.500

Prudential Public Svcs. ... 152.100 +1.500

Westinghouse Elec. ... 181.800 +1.500

Stocks closing below/below yesterday's day.

Alcan Laboratories ... 478.400 -1.400

Dr. Pepper ... 477.000 -1.000

Vermont ... 378.500 -2.500

Citgo ... 216.500 -1.500

Coca-Cola Bottling ... 200.500 -2.500

Sambo's Restaurants ... 189.100 -2.500

Mitsi Laboratories ... 181.100 -1.500

Prudential Public Svcs. ... 152.100 -1.500

Stocks closing mixed/below yesterday's day.

OTHER MARKETS

Canada mixed

Canadian Stock Markets closed on a mixed note yesterday after a moderate business. The Toronto Composite Index was 1.00 easier at 987.1, while Golds, after recent strength, receded 6.1 to 1,264.0.

Stocks and Gas, however, improved 4.2 to 1,203.7, and Banks put on 42.5 to 219.35.

The Real Estate index jumped about 21 points as Campau "A" gained \$1 to \$63 on announcing plans to make the "A" shares redeemable at \$7 each.

PARIS—There was a general advance as operators reassessed recent improvements in France's

short-term and long-term rates. They are already looking trade and unemployment figures.

Indices

NEW YORK—DOW JONES

	Oct. 13	Oct. 17	Oct. 18	Oct. 19	Oct. 20	Oct. 21	Oct. 24	Oct. 25	Oct. 26	Oct. 27	Oct. 28	Oct. 29	Oct. 30	Oct. 31	Sim.-acquisition
Industrial ...	820.51	821.54	821.64	821.77	822.00	822.36	826.76	828.17	828.17	828.17	828.20	828.20	828.20	828.20	828.20
Home Bldgs. ...	92.44	92.55	92.65	92.47	92.50	92.50	92.50	92.50	92.50	92.50	92.50	92.50	92.50	92.50	92.50
Transport ...	207.55	208.57	210.61	208.55	212.21	214.85	214.85	214.85	214.85	214.85	214.85	214.85	214.85	214.85	214.85
Utilities ...	111.74	111.87	112.07	112.07	112.07	112.07	112.07	112.07	112.07	112.07	112.07	112.07	112.07	112.07	112.07
Trading vol. ...	28,180	17,140	20,410	25,870	22,440	17,870	—	—	—	—	—	—	—	—	—

* Basis of index changed from August 24.

Ind. div. yield % Oct. 14 Oct. 7 Sep. 30 Year ago (approx.)

5.49 5.37 5.52 4.10

STANDARD AND POORS

	Oct. 18	Oct. 19	Oct. 20	Oct. 21	Oct. 22	Oct. 23	Oct. 24	Oct. 25	Oct. 26	Oct. 27	Oct. 28	Oct. 29	Oct. 30	Oct. 31	Since Compt'n
Industrials ...	102.67	102.67	102.68	102.68	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47
Y'Compsite ...	75.46	75.47	75.55	75.45	75.45	75.45	75.45	75.45	75.45	75.45	75.45	75.45	75.45	75.45	75.45
Oct. 21	102.67	102.68	102.68	102.68	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47

Ind. div. yield % Oct. 12 Oct. 6 Sept. 29 Year ago (approx.)

4.75 4.67 4.68 3.59

Ind. P/E Ratio 9.92 9.18 9.45 11.56

Long Goss. Board yield 7.76 7.65 7.64 5.27

STANDARD AND POORS

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Oct. 21	102.67	102.68	102.68	102.68	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47

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Oct. 21	102.67	102.68	102.68	102.68	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47	104.47

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STANDARD AND POORS

	Oct. 18	Oct.
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FINANCIAL TIMES SURVEY

Wednesday October 19 1977

London Metal Exchange

Centennial year for the London Metal Exchange could see a major new venture—the launching of an aluminium futures contract. Tin and lead have proved lively markets in the past 12 months, but copper and zinc remain depressed.

CENTENNIAL YEAR has not been a particularly happy one for the London Metal Exchange. Its main market, copper, has been depressed and seems to remain so for some time. On the other hand the tin market has been very active, the other metals lead down bursts of activity, and the zinc market has become a reater influence in trading result of the European price for zinc coming under heavy pressure. Trading has been steady rather spectacular, with speculators in the U.S. tending to call time as with copper to a

extent. The surface it appears to be a fairly uneventful year, apart from centennial celebrations. But the scene's plenty has happened. It now seems likely that the LME will lead with plans to launch a contract for aluminium.

It would be the first new contract on the Exchange since it was launched in 1968. It would represent a considerable gamble in that most of the world's aluminium producers, who fix the price at which they sell their product, strongly opposed to a rival medium being set up by the London Metal Exchange which could threaten traditional trading patterns in the industry. It can be deduced therefore that a new aluminium contract will not be established without a considerable struggle.

Its supporters claim that there is a definite demand for copper price for some time to come. Indeed if the controls of financing stocks versus UNCTAD proposals for times of surplus, or for an integrated commodities programme, backed by a multi-

purpose common buffer stock the fluctuating London Metal Exchange quotations. Zinc producers are also extremely reluctant to abandon their European producer price system in favour of reverting to the LME quotations, as is the case with lead.

New efforts are being staged by Continental zinc producers in particular to defend the price system established at one stage have now been clouded by 1964. They are backed to some would say poisoned by the politics surrounding the large extent by consumers too.

So it is financial risk is spread among the LME management committee for the Metal Exchange was formerly a keen supporter of a clearing system important to try and widen its association. Many leading companies, being introduced. But he has interests if it is to maintain an important, and influential, role especially in the U.S., feel that now changed his mind. A clearing system is essential.

To fulfil at the same time its role as a world metal trading centre, the LME is under pressure of the big escalation of money traded resulting from the high metal prices and a big members are to be asked to approve the introduction of the so-called "monitoring" system, linked with the use of a computer that will provide much more up-to-date information on trading details.

The basic idea is to be able to spot, and take evasive action if necessary, any dangerous situations building up. At the same time the financial guarantees provided by member companies will be more closely linked with the trading done and the extent of the risk involved.

The Bank of England appears to be prepared to accept the compromise since it is far from anxious to encourage the growth of speculation and diminution of trade hedging that are likely to result from a full-blown clearing house.

The argument is that existing industrial users of the market, who are given privileged treatment by member companies in not having to provide the margins and deposits required from other clients, would not be prepared to put up the margins required by a clearing house.

In the long term, however, it can be rightfully claimed that speculators put more money into the markets than they take out, while also providing the liquidity required for trade hedging. Nevertheless there are at present such big sums of

available money around, even in the short term, that speculators can easily claim that they are providing a haven against currency uncertainties important part of present LME and inflation that speculation is trading—the so-called "cash and carry" deals used by financial institutions to earn an easy profit.

Debate on world role

By John Edwards, Commodities Editor

Prospects

But the LME management committee has also to bear in mind that the Exchange cannot live on past glories. It will have to be expansion-minded if it is to survive the next 100 years.

Prospects for a nickel futures market are also being carefully studied in view of the changed situation in that metal, with International Nickel losing its dominance and scrapping, temporarily at least, the producer quotation in favour of confidential pricing.

Extra markets to deal in would undoubtedly be welcomed by most metal traders, faced with the prospect of a depressed

UNCTAD programme. The who prefer stable prices, especially as they are given discounts general feeling is that an international copper agreement at during times of surplus. This stage is neither practicable.

Tin prices have at present broken loose from the control of the Bank of England, as of a clearing house would be under constant pressure. LME feels that the introduction from the Bank of England, as of a clearing house would

no secret that the LME has

However, a large sector of the market, turning it into a mini-

Comex by driving away trade

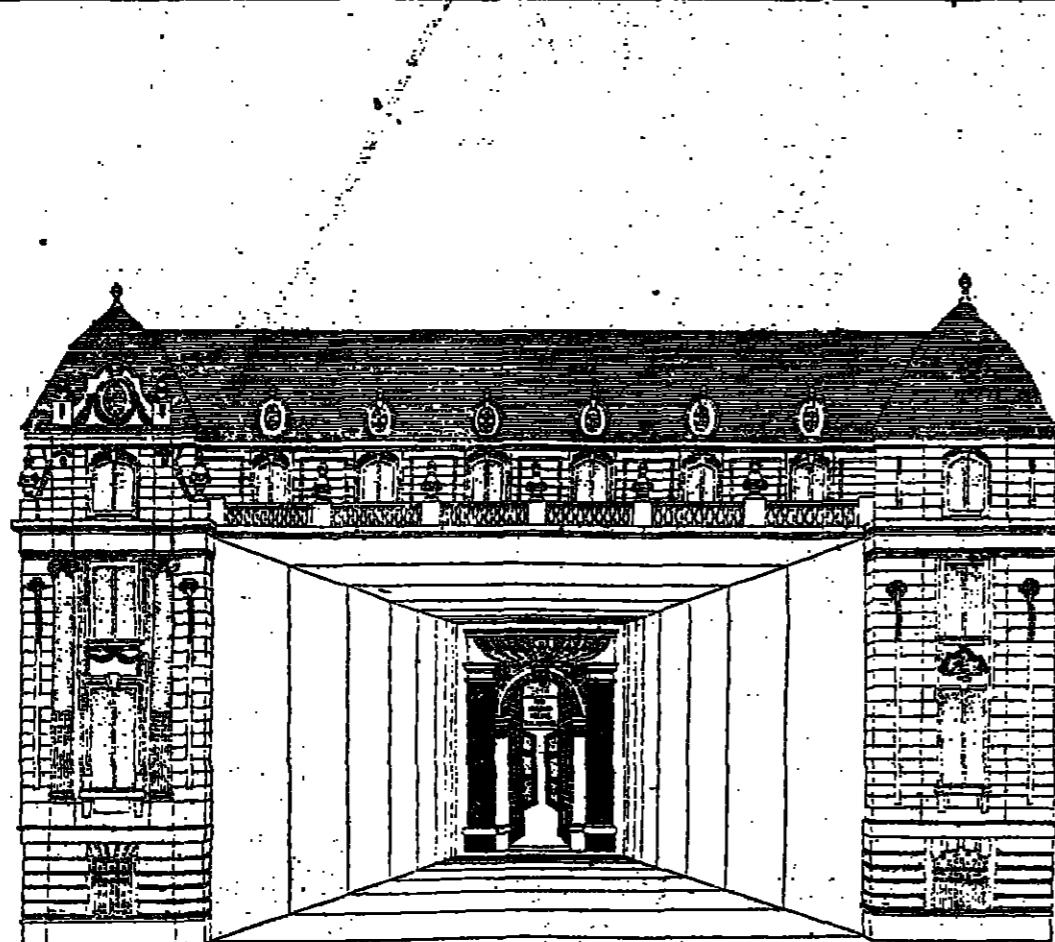
participation in favour of speculators. They point out that the unique set-up of the LME, involving principals' contracts, is very different from the ten "core" commodities that are raised sufficiently for means that the ring-dealing other commodity futures markets in that it is also an important physical trading centre.

all as companies massive financial risks, and it is feared that The debate between the two sides has continued for many years, much to the frustration of the Bank of England. But

the big failure by one company could have a domino effect that would wreck the whole market, of the Bank of England. But

people would categorically state used to be a permanent feature. This particular danger could be overcome with the kind of clearing-house system used by the LME.

Therefore that there will not be an international copper agreement good. Overall, the trend towards greater "stabilisation" of commodity markets is or so. They will disappoint supporters of a clearing house. Mr. Foster, new chairman of



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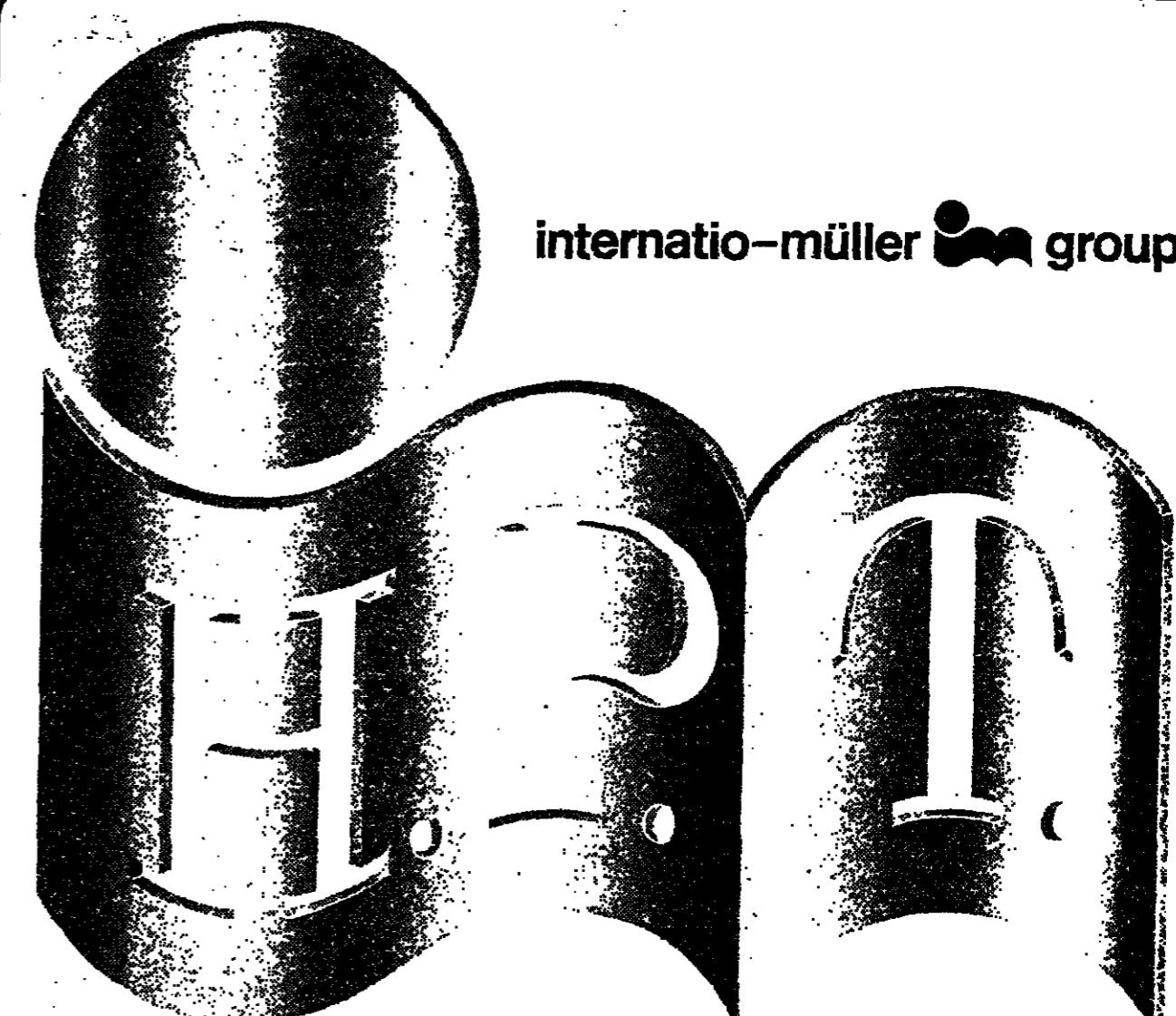
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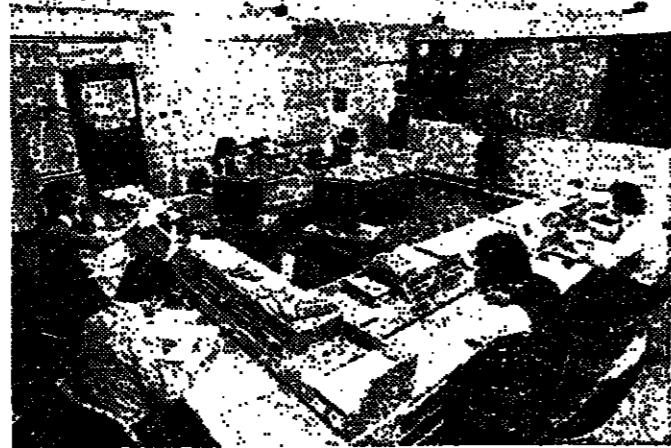
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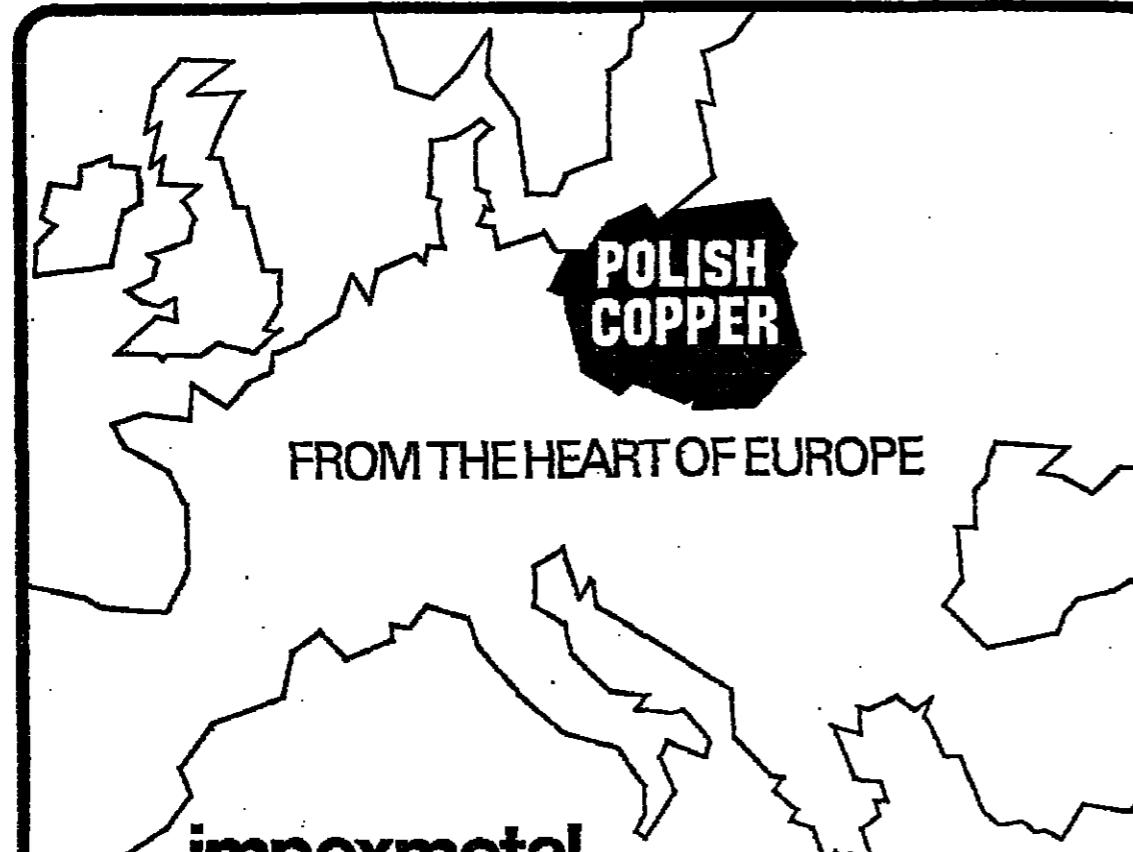
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LONDON METAL EXCHANGE IV

The future for options

OPTIONS TRADING represents only a small portion of the aggregate trading volume handled through the LME, but for the past year options have been one of the most publicised and closely scrutinised LME activities.

Responsible for bringing the topic of London metal options to the fore was the U.S. Commodity Futures Trading Commission (CFTC), which earlier this year published its proposed regulations for a three-year pilot programme of commodity options trading in the U.S.

Protest

The CFTC proposals generated a storm of protest from the LME and other London commodity exchanges, on several counts. Foremost was the proposal that overseas exchanges be required to apply formally for "recognition" in the CFTC U.S. market has already declined rapidly because of the CFTC's requirement for segregation of customer funds. When options trading commences next year on U.S. exchanges, much of this

business could disappear entirely, by an exchange with a clearing house system, which the LME does not have.

Both of these proposals were submitted to the LME, which (or so either) a contracted independent body would be at a price agreed in advance underlined by submitting to the jurisdiction from an overseas grantor and his customer.

At the end of the CFTC withdrew its insistence on a clearing house and formal recognition,

when it published revised options trading regulations at the end of August. The LME had won a major victory in principle.

This moral victory was unquestionably important to the LME's international reputation and options have traditionally been traded in copper and silver.

The real heyday of options trading came during the boom of 1973-75, when the metal buyers were willing to pay a dealer premium in return for a dealer premium in return of open interest on options transactions at the end of each day, as there is on the "soft" commodity exchanges.

In London the vast majority of metals options transactions

During that period nearly all are handled through a small number of firms, for which options, estimated at per metal options transactions were handful of firms, for which options, estimated at per

in copper and silver, the two options represent a big part of 150 tons a day on average markets with the greatest liquidity, where the grantor terms, however, the volumes of in a relatively thin market could be reasonably assured of options traded represent a very

adequate opportunity to hedge a small portion of total LME business.

It is generally reckoned by London options dealers that the

is greatly diminished. As a CFTC rule on segregation of funds has reduced their options sales to the U.S. by anywhere

from 50 to 80 per cent. Even so U.S. business still

probably accounts for slightly over half the metal options where these markets

sufficiently large and liquid support options trading.

London options dealers acknowledge that some of

and silver options accounted for selling options to the market will certainly be

reduced, and with it the been reduced to a mere trickle. Ring-dealing members, as a result of the relatively

stable price pattern of late.

Although trade in silver options has declined dramatically since 1974, dealers have

options contracts on U.S. zinc, tin, platinum and even aluminium options.

At present lead is rivalling copper as the most actively traded metal option, with an average daily turnover estimated in excess of 3,000 tons for each metal, according to some dealers.

The recent buoyancy and volatility of tin prices has even

By a Correspondent

World Copper Statistics Since 1950

This report is a comprehensive statistical compendium of the statistics on a country basis world wide relating to copper for the period 1950 through to 1976. It draws together in one volume the unique collection of copper statistics assembled by the World Bureau of Metal Statistics, over the last quarter of a century and gives detailed figures on copper production and consumption from mine through to end-use by markets.

The data displayed in 25 tables is accompanied by a useful commentary, which explains its origin and relevance in the context of the study as a whole.

"World Copper Statistics Since 1950" is an invaluable guide to the long term trends in the copper world, and will be a useful source book for members of the copper industry itself, commodity analysts, econometric model builders, and anyone wishing to understand the facts underlying the history of the copper industry over the last quarter of a century.

This volume, price £400, is available from the World Bureau of Metal Statistics, Crest House, 7 Highfield Road, Edgbaston, Birmingham B15 3ED. Tel: 021-454 7766 Telex: 339161.

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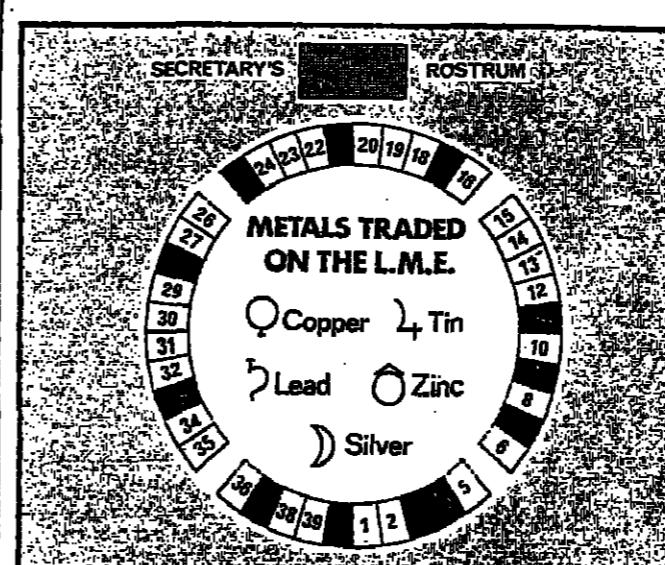
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FARMING AND RAW MATERIALS

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arning

cial Times Reporter
ER BREAD prices are
ible within a few months,
suit of the wet harvest and
Common Market grain
leading independent
mill and grain merchant
at yesterday.

Bryan Read, chairman of
Woodrow, and a member of
Home Grown Cereals'
it, said bakers feared
costs of £2.6m. this
He was speaking at the
Millers and Bakers
Association's station at
ywood.

Read said the rains in late
spoiled so much of the
tonne wheat harvest that
600,000 tonnes of it was
for breadmaking — a
tonnes less than the year
at 850,000 tonnes of this
re could be made up with
from France at the same
an extra 350,000 tonnes
d wheat will have to be
from Canada to maintain
quality.

ever, he added by far the
extra cost comes from
grain prices at Britain's
full membership of
mon Market.

ool use ill in oldrums

if wool in the major con-
countries is depressed, the
Australia Corporation says in its
monthly report.

Japan there is little
ce of any real improve-
n the wool textile industry
numerous measures
by the industry to
act market weakness.

Corporation said Japanese
wool purchases in August
per cent compared with
one month last year to
bales. Australia sent 92
nt of the total.

Western Europe, the Cor-
on sees a spread of short-
working with no significant
in the outlook for new

the U.K. most wool textile
are still very uncertain
future prospects. However
sales turned up in July
most end-season sales were

stralian exports of wool
800,000 kilos estimated
equivalent in the 1976-77
ended June 30 from
in 1975-76.

Japan will buy stranded Australian sugar

BY OUR COMMODITIES STAFF

JAPANESE sugar refiners have
negotiator in Tokyo for CSR Ltd.,
they will pay more than sales agents for the
Queensland Sugar Board, was also confident
Australian sugar stranded in
Tokyo Bay during the drawn-out
wrangle over the five-year sugar
supply agreement between the
two countries.

The Japanese agreement to pay
for the waiting cargo on a
"provisional" price of \$A886
(£435), a tonne follows an
Australian proposal for such a
deal a week ago. The price is
about 12 per cent lower than the
original contract rate.

It was suggested in Tokyo that
if the two sides could deal
quickly with the problem of the
stranded cargoes, this would enhance
the chances of an early
settlement of the main dispute.

The Australians were said to
have turned down a Japanese
proposal for a new four-year
contract, under which Japan
would buy 1.8m. tonnes at
flexible rates linked to the
London daily price.

The original five-year contract
negotiated late in 1974 called
for a total of 600,000 tonnes
at \$A405 a tonne, but
since then world market prices
have fallen far below that level.

In Canberra, Mr. Doug
Anthony, Deputy Prime Minister,
told Parliament he hoped the
Japanese would lead to a
settlement of the year-long dis-
pute.

Mr. John Laurie, chief
of the tea and sugar be set.

World tea pact hopes rise

BY OUR COMMODITIES STAFF

THE WORLD's major tea pro-
ducing nations are closer than
ever to an international tea
agreement which would regulate
world production and trade
through a system of price ranges
and regulating stocks, according
to the Secretariat of the U.N.
Committee of Trade and
Development.

However a London tea trader
commented that he could discern
no material progress at the
United talks.

After a week of discussions
delegates agreed on the need
for "an in-depth and comprehensive
analysis of the feasibility
of stocking arrangements for
tea". They also felt the advantages
and disadvantages of
such arrangements should be
studied.

"All possible assistance should
be provided to countries with
small tea production, including
land-locked countries, to assist
them in marketing their tea,"
the delegates added.

They also unanimously agreed
to support an "intensive promo-
tion campaign" to expand con-
sumption of tea throughout the
world, and a "gradual elimina-
tion of tariff and non-tariff
barriers to trade."

Negotiations on the agreement
are expected to start at a meeting
of Unctad in January in
Geneva.

At this week's London tea
auction, prices rose modestly in
response to a continued improve-
ment in consumer demand.

Medium tea rose 8p to 130p a
kilo, while quality tea gained
15p to 185p. Trade sources attri-
buted the sharp rise in quality
tea to the arrival of quality
of the new Assam crop
season. "Increased demand has
brought many buyers back into
the market," one trader com-
mented.

The increased consumption had
tightened supplies and increased
world prices. But prices had
eased somewhat as supplies from
the large 1977 world crop
reached the market.

Total U.S. tea imports this
year are expected to be about
110,000 tonnes. Last year's
imports were 82,239 tonnes.

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STOCK EXCHANGE REPORT

Gilt and equities rise on encouraging signs on wages

Bear closing and genuine buying takes index up 14 to 513.1

Account Dealing Dates

Option

First Declarer

Last Account

Dealsings

Deals Day

Oct. 3 Oct. 13 Oct. 14 Oct. 25

Oct. 17 Oct. 27 Oct. 28 Nov. 8

Oct. 31 Nov. 10 Nov. 11 Nov. 22

"New line" dealings may take place from 1.30 a.m. two business days earlier.

The underlying technical

strength in stock markets showed

through quite clearly yesterday

when the equity leaders moved

ahead on a broad front to give the

FT 30-share index its biggest rise

in a day for over three weeks with a jump of 14 points to 513.1.

Encouraging signs overnight that the Ford workers will accept the company's latest 12 per cent offer

were given added point by further

plants giving their vote for the

offer yesterday and markets

already showing relief with all-round gains, moved sharply better in the market after the first

reports of the shop stewards' approval of the British Leyland wage bargaining reform plan in

Gilt-edged also benefited from

the improved outlook for restraint

in wage settlements and recovered

some of the recent lost ground.

Business was concentrated chiefly

in the short end of the market

which ended with gains to about

£1. London stocks were more

volatile and closed with modest gains to 14, and the Government Securities Index put on 0.42 to 71.11 which compares with its

recent high of 79.85.

The equity leaders made steady

progress throughout the early

trade on bear closing and cheap

buying in the absence of sellers,

and more genuine buying was in

progress during the afternoon.

Prices were tending to bear over

in the late trade, but the gains

on the wares front led to a late

burst of strength in Lucas In-

dustries, an index constituent,

which closed 23 up at 310p after

having been 299p after 3 p.m.

Rises outnumber falls in all

FT-quoted Industrials by 5-to-1,

underlining the one-way mood of

the market, and the FT-averages

three main indices all rose by 2

to 2.3 per cent. with the All-share

at 221.36, about 2.1 per cent. below

its 1977 high.

Gifts better

British Funds took a marked

turn for the better yesterday.

Growing optimism about the out-

come of the Ford workers' pay

ballot helped towards the turn-

round in sentiment, while news

that the Leyland shop stewards

had voted in favour of the com-

pany's plan for centralised bar-

gaining gave the market an

additional boost. Short-dated

maturity ended with buying interest

continuing into the late dealing.

Final quotations were around the

day's best. Rises ranged in £

Treasury 14 per cent, 1982,

improving that amount to 14.11.

ICI closed 6 higher at the day's

best of 418p after a reasonable

issues was at a rather low level. Nevertheless, prices were quick to respond to scattered demand in the prevailing conditions and gains of 14 were fairly com- monplace. Treasury 144 per cent, 1984, and Treasury 131 per cent, 1987, were both up by this much at 1244 and 1171 respectively, while Treasury 9 per cent, 1994, put on a point to 861. Corporations took their cue from the main Funds, but gains were scattered and limited to only 1.

The investment currency market saw a flurry of buying at the opening which was mainly of a professional nature and had the effect of raising the premium from 943 per cent to 96 per cent. However, calmer conditions prevailed later and arbitrage offerings slightly lowered the premium to a trading level of 98 per cent. for much of the afternoon before a close of 944 per cent, and a net gain of 1. Yesterday's 50p conversion factor was 0.7500 (10.750).

The last dealing in Bank of England also benefited from the improved outlook for restraint in wage settlements and recovered some of the recent lost ground. Business was concentrated chiefly in the short end of the market which ended with gains to about 4. London stocks were more volatile and closed with modest gains to 14, and the Government Securities Index put on 0.42 to 71.11 which compares with its recent high of 79.85.

The equity leaders made steady progress throughout the early trade on bear closing and cheap buying in the absence of sellers, and more genuine buying was in progress during the afternoon. Prices were tending to bear over in the late trade, but the gains on the wares front led to a late burst of strength in Lucas Industries, an index constituent, which closed 23 up at 310p after having been 299p after 3 p.m.

Rises outnumber falls in all FT-quoted Industrials by 5-to-1, underlining the one-way mood of the market, and the FT-averages three main indices all rose by 2 to 2.3 per cent. with the All-share at 221.36, about 2.1 per cent. below its 1977 high.

Allied Irish sold

Breweries improved throughout the list, with AB Guinness 6 up at 120p, while Carlsberg 10 and Heublein 12 both rose to 122p and Midland and NatWest both 5 up at 348p and 268p respectively. Allied Irish, however, were sold down to 140p for a loss on the day of 8 per cent on suggestions of a rights issue. Distillers 10, put on 8 to 168p and Sun Alliance 18 to 163p.

A nervous market of late on adverse rumours concerning cer-

tain aviation underwriting losses, Insurance Companies 10 and 12 per cent peaked up yesterday.

Helped by surrounding market strength, General Accident added 10 to 263p as did Phoenix to 302p, while Commercial Union put on 8 to 168p and Sun Alliance 18 to 163p.

British Funds took a marked turn for the better yesterday. Growing optimism about the outcome of the Ford workers' pay ballot helped towards the turn-

round in sentiment, while news

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Treasury 14 per cent, 1982,

improving that amount to 14.11.

ICI closed 6 higher at the day's

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business. Elsewhere in Chemicals, Fisons rose 27 to 387p on a brisk demand and fresh speculative interest lifted Federated 4 to 144 per cent, and Treasury 131 per cent, 1987, were both up by this much at 1244 and 1171 respectively, while Treasury 9 per cent, 1994, put on a point to 861. Corporations took their cue from the main Funds, but gains were scattered and limited to only 1.

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Bronze notable for a speculative improvement of 4 at 45p. Stag 6 up at 102p, Parker Knoll 4 better at 108p, and Stenhouse, 5p, and Highgate 6 to 56p, and Highgate Opticals 4 to 40p, Dunlop, however, reacted 8 to 120p after Monday's following news of the abortive bid discussions. Mining Supplies picked up 6 to 70p on hope of new developments.

In Foods, J. Bibby rose 8 to 182p as bid speculation revived, while Tate and Lyle, 10sp, and Pork Farms, 340p, put on 8 and 10 respectively. Brooke Bond eased to 54p on slight disappointment, the results before closing unchanged on the day at 55p. Associated Fisheries also

closed 6 up at 102p, Parker Knoll 4 better at 108p, and Stenhouse, 5p, and Highgate Opticals 4 to 40p, Dunlop, however, reacted 8 to 120p after Monday's following news of the abortive bid discussions. Mining Supplies picked up 6 to 70p on hope of new developments.

News that the British Leyland shop stewards had voted in favour of the pay reform package, coupled with the favourable votes at the Ford plants directed attention to Motors and Distributors which made good headway, particularly in the late trade.

Leisure Industries 24 to 224p, while Lucas Industries 24 to 224p, with Westinghouse, 10p, and British Steel 10 to 10p, Group Lotus, 21 to 210p, Group Lotus, 21 to 210p, and Turner Manufacturing, 120p, Dunlop hardened 3 to 90p as did Kwik-Fit to 88p.

North Sea oil orientated stocks among Newspapers gained ground. Associated closed 9 up at 172p and Thomson, 11 to the good of 172p.

Ascan, Financial rose 16 to 370p on renewed speculation about the outcome of the Wrenigate bid.

Oils improve late

After a fairly quiet start, buying interest in Oils began to have a noticeable effect around mid-afternoon and closing prices were the best of the day. British Petroleum gained 6 to 280p, with partly-owned 5p higher at 365p, while Royal Dutch, still being influenced by the firmness of the dollar premium, put on 4 more to 424p. Esso/Unocal improved 3 to 61p, while Ultramar were 4 better at 254p. North Sea speculative issues had Exploration 6 higher at 275p, Shell 4 up to 268p, and Texaco, 10 to 174p. Group Lotus, 21 to 210p, and Turner Manufacturing, 120p, Dunlop hardened 3 to 90p as did Kwik-Fit to 88p.

Oilseeds moved attention to BAE Industries Deferred, which rose 2 to 230p in active trading. Higher interim figures lifted Siemens Hunter 4 to 57p, while Lucas Industries 24 to 224p, and British Steel 10 to 10p, Group Lotus, 21 to 210p, and Turner Manufacturing, 120p, Dunlop hardened 3 to 90p as did Kwik-Fit to 88p.

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FT SHARE INFORMATION SERVICE

**BRITISH FUNDS

"Shorts" (Lives up to Five Years)

High	Low	Stock	2	4	8	12	24	36	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340	356	372	388	404	420	436	452	468	484	500	516	532	548	564	580	596	612	628	644	660	676	692	708	724	740	756	772	788	804	820	836	852	868	884	900	916	932	948	964	980	996	1012	1028	1044	1060	1076	1092	1108	1124	1140	1156	1172	1188	1204	1220	1236	1252	1268	1284	1300	1316	1332	1348	1364	1380	1396	1412	1428	1444	1460	1476	1492	1508	1524	1540	1556	1572	1588	1604	1620	1636	1652	1668	1684	1700	1716	1732	1748	1764	1780	1796	1812	1828	1844	1860	1876	1892	1908	1924	1940	1956	1972	1988	1994	2010	2026	2042	2058	2074	2090	2106	2122	2138	2154	2170	2186	2202	2218	2234	2250	2266	2282	2298	2314	2330	2346	2362	2378	2394	2410	2426	2442	2458	2474	2490	2506	2522	2538	2554	2570	2586	2602	2618	2634	2650	2666	2682	2698	2714	2730	2746	2762	2778	2794	2810	2826	2842	2858	2874	2890	2906	2922	2938	2954	2970	2986	2992	3008	3024	3040	3056	3072	3088	3094	3110	3126	3142	3158	3174	3190	3206	3222	3238	3254	3270	3286	3302	3318	3334	3350	3366	3382	3398	3414	3430	3446	3462	3478	3494	3510	3526	3542	3558	3574	3590	3606	3622	3638	3654	3670	3686	3702	3718	3734	3750	3766	3782	3798	3814	3830	3846	3862	3878	3894	3910	3926	3942	3958	3974	3990	4006	4022	4038	4054	4070	4086	4092	4108	4124	4140	4156	4172	4188	4204	4220	4236	4252	4268	4284	4300	4316	4332	4348	4364	4380	4396	4412	4428	4444	4460	4476	4492	4508	4524	4540	4556	4572	4588	4604	4620	4636	4652	4668	4684	4700	4716	4732	4748	4764	4780	4796	4812	4828	4844	4860	4876	4892	4908	4924	4940	4956	4972	4988	4994	5010	5026	5042	5058	5074	5090	5106	5122	5138	5154	5170	5186	5202	5218	5234	5250	5266	5282	5298	5314	5330	5346	5362	5378	5394	5410	5426	5442	5458	5474	5490	5506	5522	5538	5554	5570	5586	5602	5618	5634	5650	5666	5682	5698	5714	5730	5746	5762	5778	5794	5810	5826	5842	5858	5874	5890	5906	5922	5938	5954	5970	5986	5992	6008	6024	6040	6056	6072	6088	6104	6120	6136	6152	6168	6184	6200	6216	6232	6248	6264	6280	6296	6312	6328	6344	6360	6376	6392	6408	6424	6440	6456	6472	6488	6504	6520	6536	6552	6568	6584	6600	6616	6632	6648	6664	6680	6696	6712	6728	6744	6760	6776	6792	6808	6824	6840	6856	6872	6888	6904	6920	6936	6952	6968	6984	6990	7006	7022	7038	7054	7070	7086	7092	7108	7124	7140	7156	7172	7188	7204	7220	7236	7252	7268	7284	7290	7306	7322	7338	7354	7370	7386	7392	7408	7424	7440	7456	7472	7488	7504	7520	7536	7552	7568	7584	7590	7606	7622	7638	7654	7670	7686	7692	7708	7724	7740	7756	7772	7788	7794	7810	7826	7842	7858	7874	7890	7906	7922	7938	7954	7970	7986	7992	8008	8024	8040	8056	8072	8088	8104	8120	8136	8152	8168	8184	8190	8206	8222	8238	8254	8270	8286	8302	8318	8334	8350	8366	8382	8398	8414	8430	8446	8462	8478	8494	8510	8526	8542	8558	8574	8590	8606	8622	8638	8654	8670	8686	8702	8718	8734	8750	8766	8782	8798	8814	8830	8846	8862	8878	8894	8910	8926	8942	8958	8974	8990	9006	9022	9038	9054	9070	9086	9102	9118	9134	9150	9166	9182	9198	9214	9230	9246	9262	9278	9294	9310	9326	9342	9358	9374	9390	9406	9422	9438	9454	9470	9486	9502	9518	9534	9550	9566	9582	9608	9624	9640	9656	9672	9688	9704	9720	9736	9752	9768	9784	9790	9806	9822	9838	9854	9870	9886	9892	9908	9924	9940	9956	9972	9988	9994	10000	10016	10032	10048	10064	10080	10096	10112	10128	10144	10160	10176	10192	10208	10224	10240	10256	10272	10288	10304	10320	10336	10352	10368	10384	10400	10416	10432	10448	10464	10480	10496	10512	10528	10544	10560	10576	10592	10608	10624	10640	10656	10672	10688	10704	10720	10736	10752	10768	10784	10790	10806	10822	10838	10854	10870	10886	10892	10908	10924	10940	10956	10972	10988	10994	11000	11016	11032	11048	11064	11080	11096	11112	11128	11144	11160	11176	11192	11208	11224	11240	11256	11272	11288	11304	11320	11336	11352	11368	11384	11400	11416	11432	11448	11464	11480	11496	11512	11528	11544	11560	11576	11592	11608	11624	11640	11656	11672	11688	11704	11720	11736	11752	11768	11784	11800	11816	11832	11848	11864	11880	11896	11912	11928	11944	11960	11976	11992	12008	12024	12040	12056	12072	12088	12104	12120	12136	12152	12168	12184	12200	12216	12232	12248	12264	12280	12296	12312	12328	12344	12360	12376	12392	12408	12424	12440	12456	12472	12488	12504	12520	12536	12552	12568	12584	12600	12616	12632	12648	12664	12680	12696	12712	12728	12744	12760</th

INDUSTRIALS—Continued

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